

AZURESMART

Azure PostgreSQL Migration

Motifworks Azure Migration services



Today

- On premises PostgreSQL Databases

- This is built on VM or Physical servers

- Servers and infrastructure to manage by Infra team

- Upfront capacity planning, fixed scale

Future

- Cloud platform of Azure PostgreSQL database to ensure 24/7 availability

- PostgreSQL database service built on Microsoft's scalable cloud infrastructure for application developers

- Built-in features maximize performance, availability, and security

- Fly without downtime to efficiently deliver existing and new applications with reduced operational overhead

Azure PostgreSQL database features


- Integration with JSONB, geospatial support, rich indexing and many extensions
- High-performance horizontal scaling in Hyperscale (Citus)
- Manage Postgres with Azure IP Advantage and Advanced Threat Protection
- Hyperscale your PostgreSQL
- Updated latest PostgreSQL innovations
- Intelligent performance recommendations

Azure PostgreSQL db - Single Server

- Built-in high availability with no additional cost (99.99% SLA)
- Predictable performance, using inclusive pay-as-you-go pricing
- Vertical scale as needed within seconds
- Monitoring and alerting to server
- Enterprise-grade security and compliance
- Secured to protect sensitive data
- Automatic backups and point-in-time-restore for up to 35 days

Azure PostgreSQL db - Hyperscale (Citus)

- Horizontal scaling across multiple machines using sharding
- Query parallelization across these servers for faster responses on large datasets
- Excellent support for multi-tenant applications
- Excellent support for real time operational analytics
- Excellent support for high throughput transactional workloads

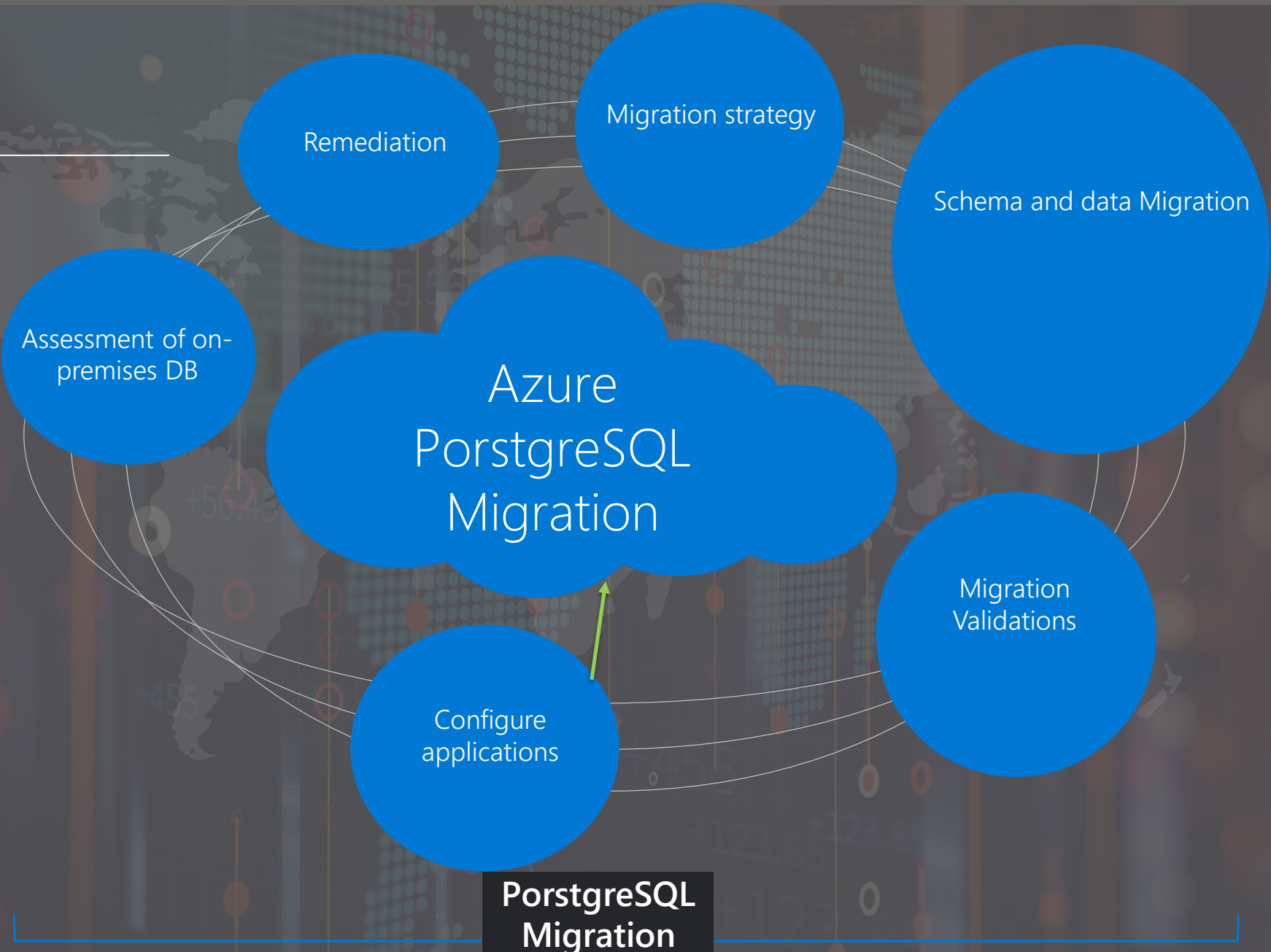


How to perform migration without downtime and how to ensure smooth migration without any issues

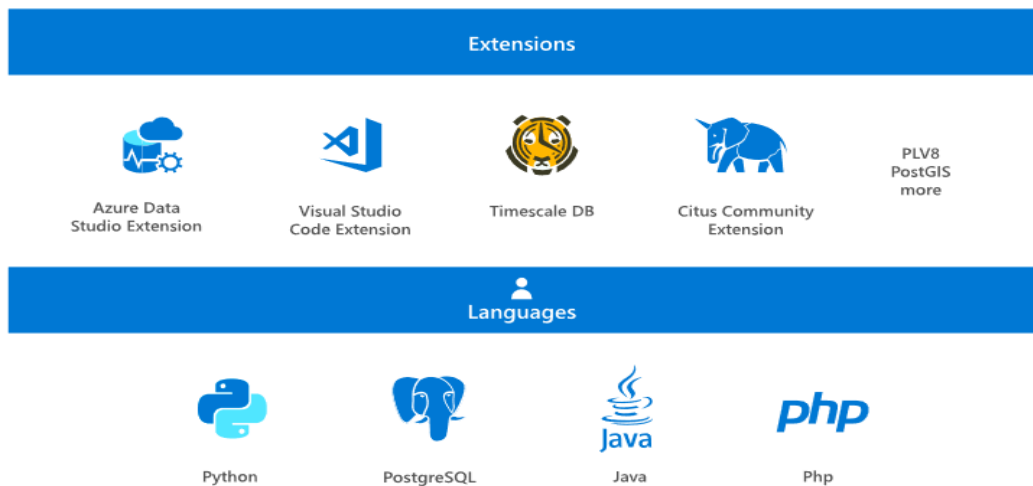
It looks like I need to start from scratch or rebuild for the cloud?

How do I get started, What are different options for migrations

Migration approach

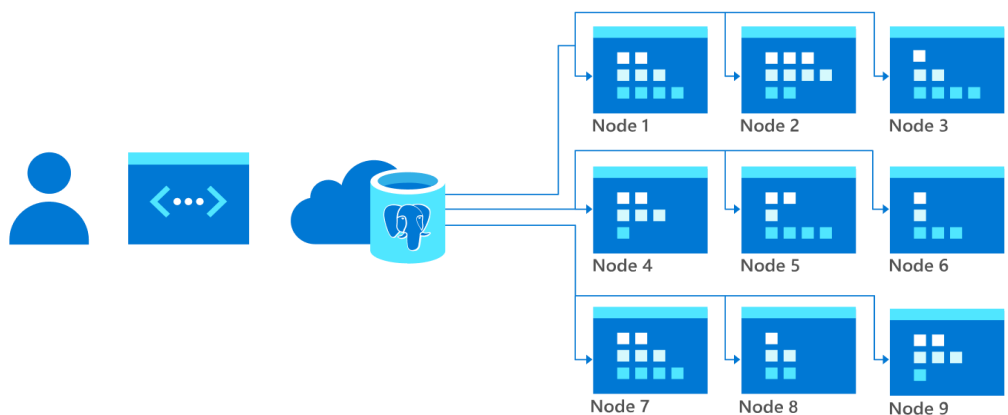


Innovate with open-source tools and extensions



- Build or migrate your workloads with confidence using our fully managed service on community PostgreSQL.
- Use Microsoft favourite extensions, such as PLV8, PostGIS and TimescaleDB and popular frameworks and languages like Ruby on Rails, Python with Django, Java with Spring Boot and Node.js.

Hyperscale your PostgreSQL database



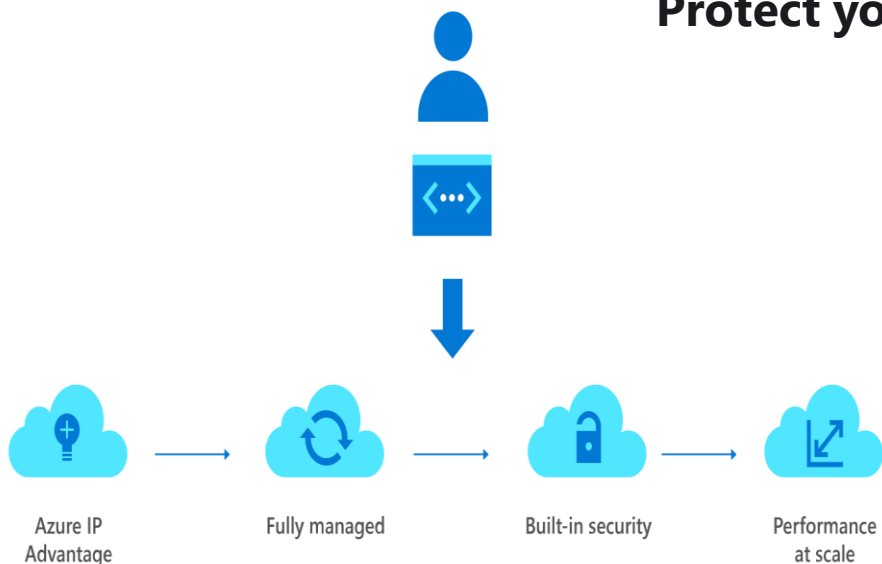
- Scale with ease to hundreds of nodes, with no application rewrites.
- Save time by running transactions and analytics in one database and avoid the costs of manual sharding.
- Stay up to date with the latest PostgreSQL innovations thanks to the Hyperscale (Citus) extension.

Maximize database performance with ease



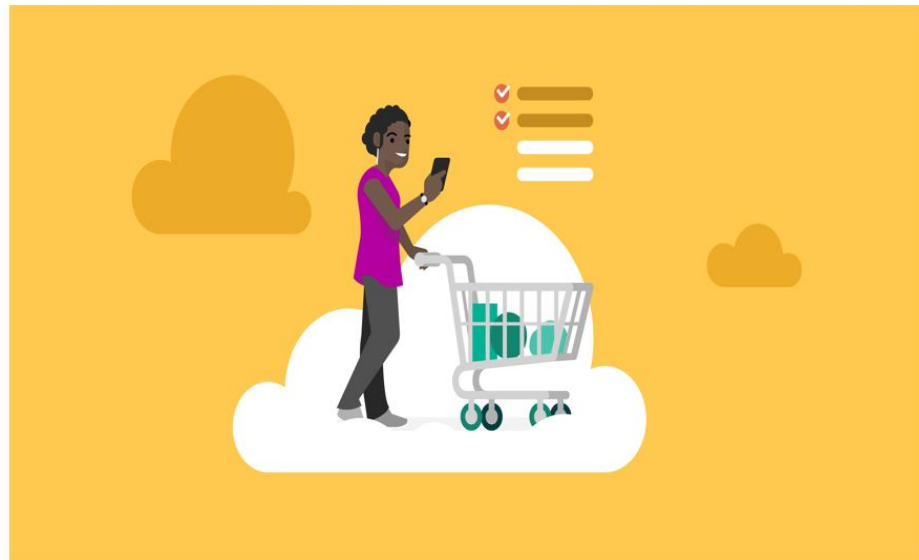
- Do more with your application using customized performance recommendations.
- Use the query performance insight feature to monitor and detect disruptive events that can hamper performance.

Protect your IP on a fully managed Azure service

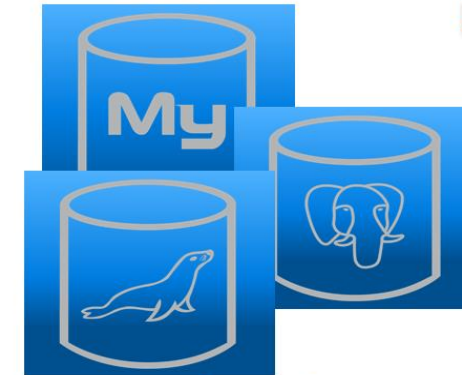


- Let Azure manage the time- and cost-intensive tasks associated with database maintenance, hosting and high availability.
- Provision in minutes and independently scale compute or storage in seconds. Count on enterprise-grade security and compliance and protect your innovation in the cloud with best-in-industry indemnification coverage via Azure IP Advantage.

On-premise PostgreSQL to Azure PostgreSQL Migration using DMS



DMS continuous sync



DMS
continuous
sync



DMS Continuous Sync

1. Migrate initial load

2. New transactions continue to sync to target until data catches up

3. Stop new traffic coming in

4. Wait for the data to catch up

5. Complete DB migration



Migrate on-premises PostgreSQL database to Azure PostgreSQL database.

By using Azure DMS, ADF features

Migrate on-premises PostgreSQL database to Azure PostgreSQL database.

There are smooth ways to migrate PostgreSQL databases from GB to TB to Azure PostgreSQL databases using different tools available from Microsoft. We have all expertise that helps to complete pre-migration and post-migration activity smoothly.

QUESTIONS WE ANSWER



Can we migrate PostgreSQL databases **using DMS** ?

What **changes are required** to migrate my on-premises PostgreSQL databases to Azure PostgreSQL ?

Do I need to **arrange downtime** or online migration ?

What will be my **costs in Azure PostgreSQL database** ?

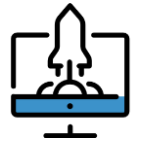
How do I **get started**?



WHAT YOU GAIN



Analysis of on premises database and database objects



Select correct option for Azure PostgreSQL migration



Proceed with Migration, change connections in applications



Azure Cost Projections and savings analysis



PLANNING

MIGRATION PLANNING

- Finalize Migration Scope
- Define Teams and Roles
- Create Timeline and Budget
- Assessment of on- premise server and databases



ARCHITECTURE

AZURE ARCHITECTURE WORKSHOPS

Deep dive workshops:

- Azure Architecture
- Hybrid-Cloud and AAD
- Security Requirements and Architecture
- Migration Approaches
- High-Availability, Backup and DR requirements

ARCHITECTURE DESIGN

- Finalize Network and Security Architecture
- Create High-Availability and DR Architecture
- Define Azure Subscriptions, Resource Groups, Naming Conventions etc.



MIGRATION

MIGRATION AND AZURE SERVICES

- Azure Dev-Test Labs
- Create Azure PostgreSQL server
- Create Azure PostgreSQL databases
- Start with Migration activity
- After completion test all data
- Change connection string in applications configuration

WORKLOAD MIGRATION

- Pre-Migration Checklist
- Lift and Shift Migration
- Remediation and Migration
- Data Migration
- Post-Migration Testing and Validation



MANAGEMENT

MONITORING AND MANAGEMENT

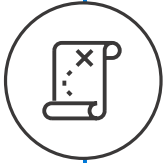
Setup best practices monitoring for resources and cost monitoring.

- PostgreSQL database utilization alerts
- Site Recovery and Backup
- Cost Management
- Setup of proper database monitoring alerts

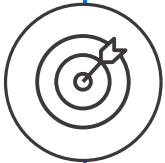
AZURE MANAGEMENT AND GOVERNANCE

- Implement Monitoring, Security and Management Controls
- Implement DR and Backup wherever required.

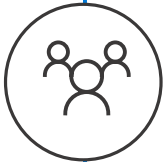
LET'S START MIGRATION ASSESSMENT AND PLANNING TO COMPLETE YOUR MIGRATION ACTIVITY AND USE AZURE PostgreSQL DATABASES.



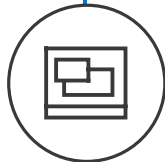
Review your **On-Premises PostgreSQL databases** list and proceed.



Complete the Azure **Migration planning**



Partner with Motifworks for further planning of actual migration



Create your **roadmap to migrate On-Premises to Azure PostgreSQL databases.**