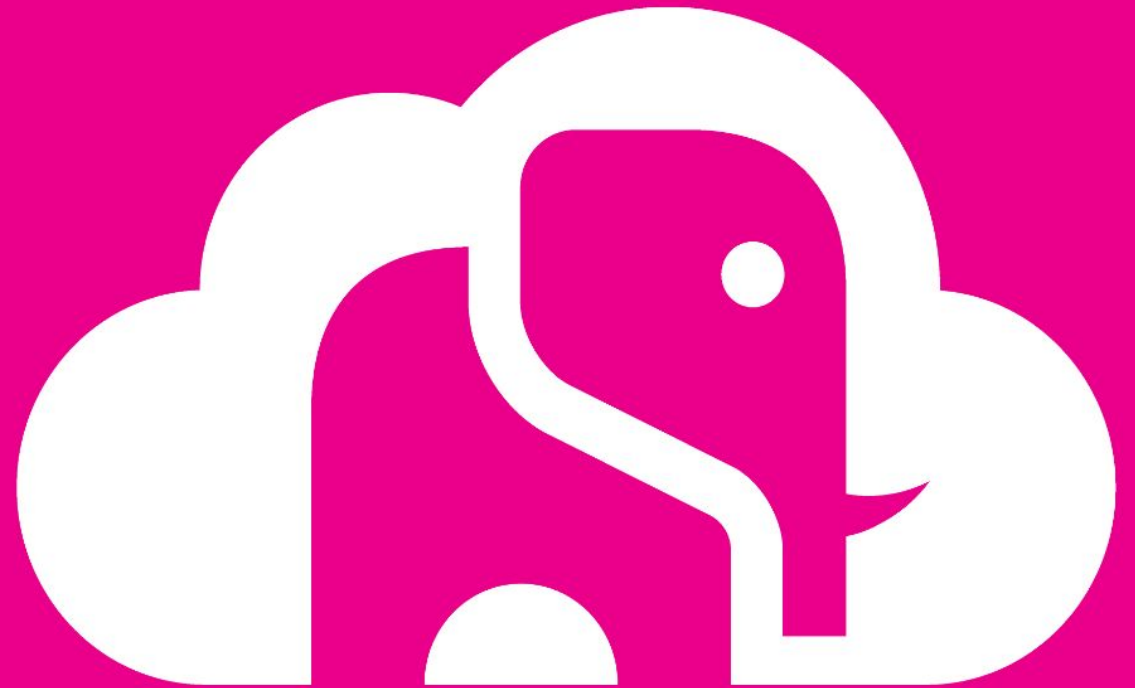


How to simplify development with Cloud Databases using APIs

Doug Ortiz

March 2022



Welcome

Housekeeping Items



Slides and recording will be
available within 24 hours



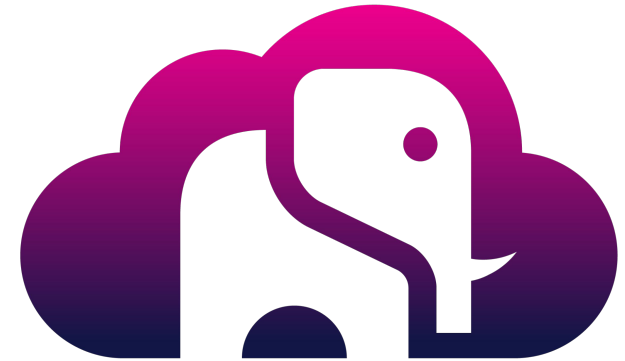
Questions will be
answered at the end



Agenda

How to simplify development with Cloud Databases using APIs

- What are APIs and why are they important
- API development, and how they are related to Cloud Databases
- Walk through an API example with BigAnimal
- BigAnimal API authentication, and cluster management

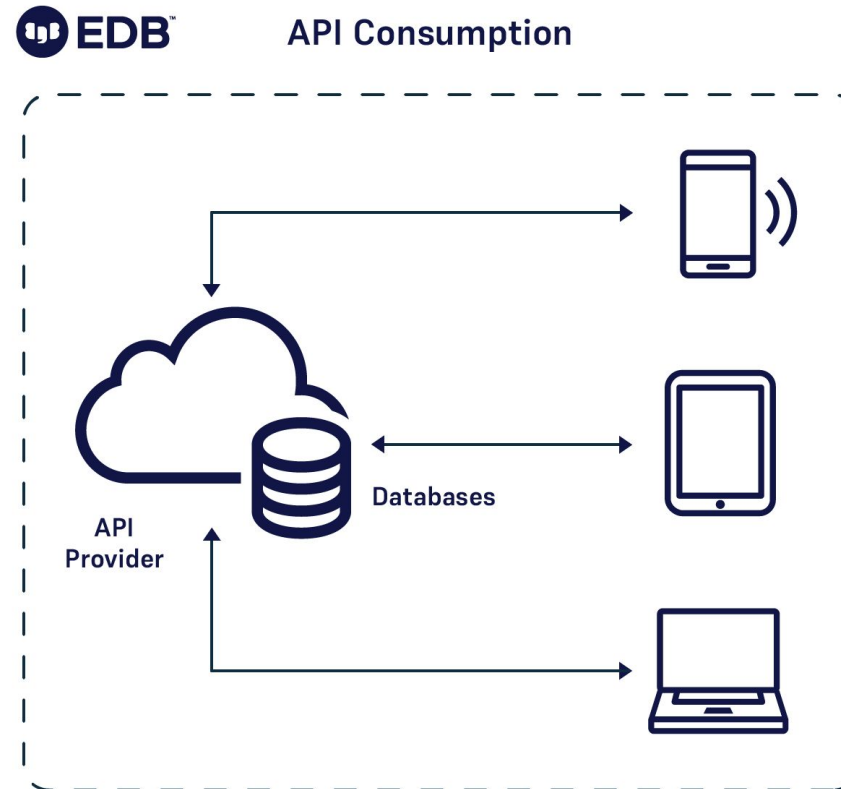


What are APIs?

The rise of APIs

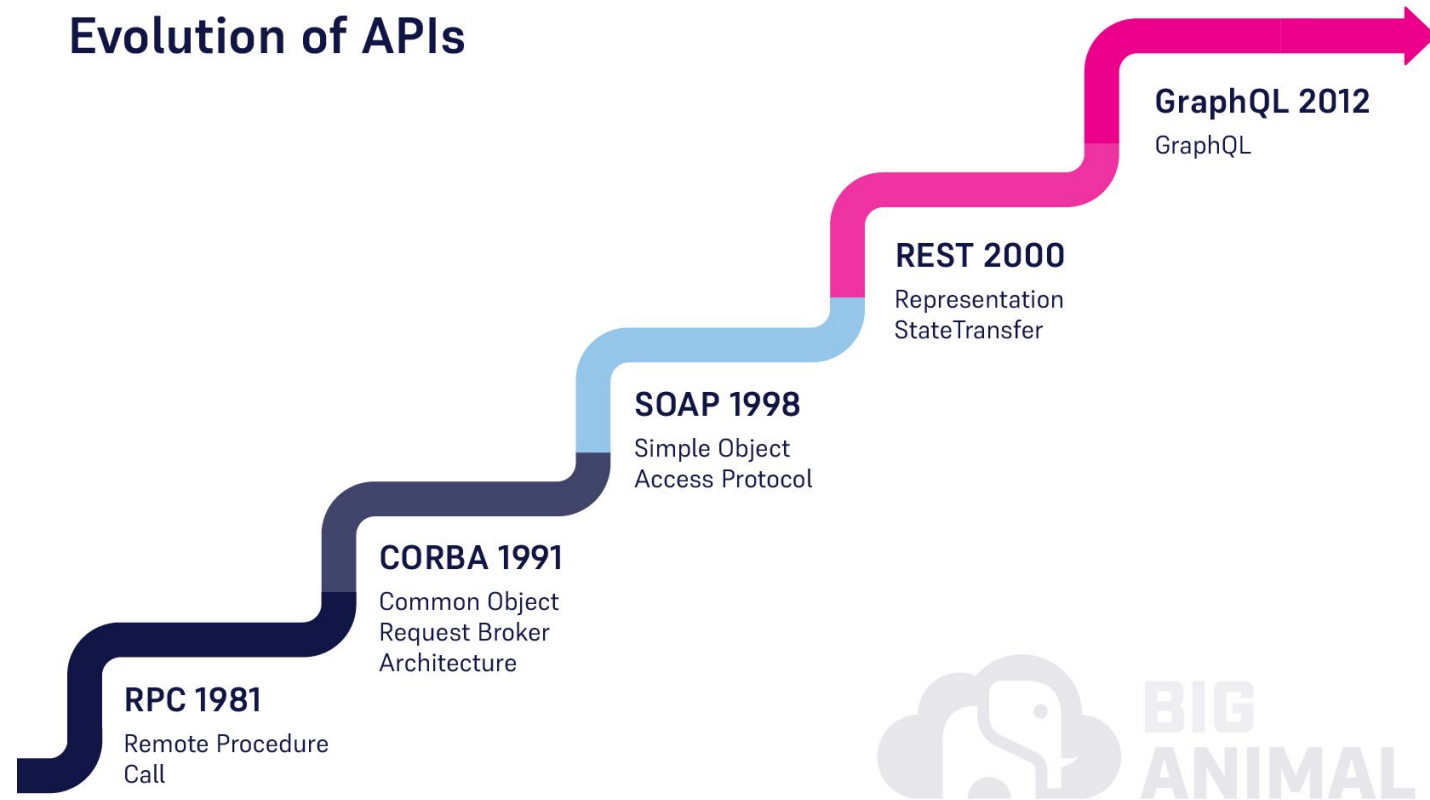
- API also known as Application Programming Interface
- An API is a set of protocols, routines, functions, and/or commands that facilitate interaction between software services.
- Modern APIs have been around since the early 2000s.

Importance of APIs



APIs

Evolution of APIs



API Development

Multiple development languages

- A few examples
 - Bash
 - Python
 - Go
 - Ansible



API Examples

Google APIs Explorer

Google APIs Explorer

Search

Language

Sign in

Google APIs Explorer

Type to filter APIs

Title	Description
Abusive Experience Report API	Views Abusive Experience Report data, and gets a list of sites that have a significant number of abusive experiences.
Accelerated Mobile Pages (AMP) URL API	Retrieves the list of AMP URLs (and equivalent AMP Cache URLs) for a given list of public URL(s).
Access Context Manager API	An API for setting attribute based access control to requests to GCP services.
Ad Exchange Buyer API	Accesses the latest features for managing Authorized Buyers accounts, Real-Time Bidding configurations and auction metrics, and Marketplace programmatic deals.
Ad Experience Report API	Views Ad Experience Report data, and gets a list of sites that have a significant number of annoying ads.
Admin SDK API 1	Admin SDK lets administrators of enterprise domains to view and manage resources like user, groups etc. It also provides audit and usage reports of domain.
Admin SDK API 1	Admin SDK lets administrators of enterprise domains to view and manage resources like user, groups etc. It also provides audit and usage reports of domain.
Admin SDK API 1	Admin SDK lets administrators of enterprise domains to view and manage resources like user, groups etc. It also provides audit and usage reports of domain.
AdMob API	The AdMob API allows publishers to programmatically get information about their AdMob account.
AdSense Host API	The AdSense Host API gives AdSense Hosts access to report generation, ad code generation, and publisher management capabilities.
AdSense Management API	The AdSense Management API allows publishers to access their inventory and run earnings and performance reports.
AI Platform Training & Prediction API	An API to enable creating and using machine learning models.
Analytics Core Reporting API v3	Query for dimensions and metrics to produce customized reports.

Google APIs Explorer

<https://developers.google.com/apis-explorer/#p/>

Facebook APIs

Facebook APIs

<https://developers.facebook.com/docs>

Documentation

Learn the basics of how to send and receive data from the Facebook Social Graph and how to implement the APIs, Platforms, Products, and SDKs to fit your application needs.

Facebook Business Extension

Easily set up Facebook's best business tools in your platform for a one-stop shop.

[Overview](#) [Docs](#)

Cloud Gaming

Learn how to create and publish Cloud games, which are native Android and Windows games hosted and streamed by Facebook. They're playable instantly, on mobile and web, with no downloads required!

[Overview](#) [Docs](#)

Facebook Pay Integration

Learn how you can integrate Facebook Pay into your online store and customers can use the Facebook Pay button to check out.

[Docs](#)

Artificial Intelligence

Wit.ai [🔗](#)

Augmented Reality

Spark AR Studio [🔗](#)

Business Tools

Facebook App Ads [📖](#)

App Events [📖](#)

App Links [📖](#)

Audience Network [📖](#)

Gaming

Game Payments [📖](#)

Legacy Web Games [📖](#)

Instant Games [📖](#)

Unity SDK [📖](#)

How APIs relate to cloud databases

API

Read

Create

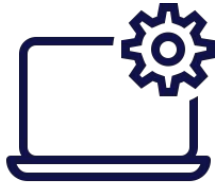
Update

Delete

BigAnimal

Databases in the cloud today

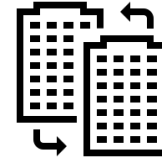
Challenges for enterprises



Behind with bug fixes, security updates, and new capabilities



Don't provide the control, capabilities, and performance tuning enterprises need



Lack easy migration for existing on prem PostgreSQL or Oracle databases



Meeting the demands of the modern enterprise

- Product focused on Enterprise cloud journey
- Aggressive security and compliance roadmap
- Extensive Enterprise-grade features
 - SSO
 - Audit logging
 - RBAC



Why BigAnimal?

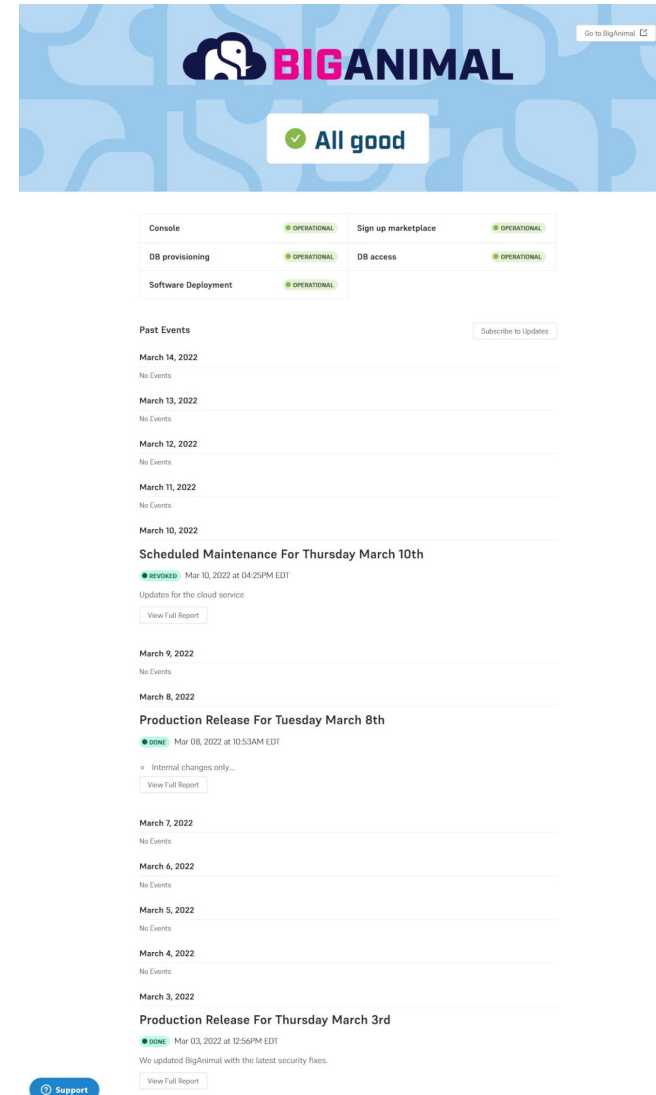
- Fully managed Database-as-a-service
 - Built-in Oracle compatibility
 - Running in the cloud
 - Operated by **the Postgres Experts**
 - **15 years in the making**
 - **Goes above and beyond the basics**
- Closes the gap between
 - What enterprises need
 - What the cloud service providers are offering today



BigAnimal Status

Available at: <https://status.biganimal.com/>

- GUI based
- Display status for
 - Console
 - Database provisioning
 - Software deployment
 - Sign up marketplace
 - Database access
- Lists events
 - Past events
 - Releases and changes



BigAnimal Documentation

Available at: <https://portal.biganimal.com/api/docs/>



The screenshot shows the BigAnimal REST API documentation portal. At the top, there's a dark blue header with the BigAnimal logo and a version dropdown set to 'v1'. Below the header, the main content area has a light gray background. It features the BigAnimal logo with version tags '14.37.0' and 'OAS3', followed by the text 'BigAnimal REST API' and a link to 'BigAnimal Support - Website'. A 'Servers' section contains a dropdown menu with '/api/v1' selected. The main content is organized into expandable sections: 'Billing', 'Cloud Providers', and 'Clusters'. The 'Billing' section is expanded, showing a single endpoint: 'GET /billing' with a 'read:billing' permission. The 'Cloud Providers' section is also expanded, showing five endpoints: 'GET /cloud-providers' (read:clusters), 'GET /cloud-providers/{cloudProviderId}/regions' (read:clusters), 'GET /cloud-providers/{cloudProviderId}/regions/{regionId}/instance-types' (read:clusters), 'GET /cloud-providers/{cloudProviderId}/regions/{regionId}/volume-types' (read:clusters), and 'GET /cloud-providers/{cloudProviderId}/regions/{regionId}/volume-types/{volumeTypeId}/volume-properties' (read:clusters). The 'Clusters' section is partially visible at the bottom.



Authentication towards API

Authentication

Performed via a Token

- Token
 - Unique identifier utilized to authenticate towards an API as an application of user
- Where to obtain a token
 - <https://github.com/EnterpriseDB/cloud-utilities/tree/main/api>
- Obtain a token
 - `get-token.sh`

```
{  "access_token": "<yourtoken>",  "refresh_token": "v1.MZY5PHwcVWeDw82c5C2qkRa5U3Cenp3eD2beagy6DmQCxf7FGU9U9XczyDjWaJmboe  
oDYwbzgyUBt80lNINM0fk",  "scope": "openid profile email  
offline_access",  "expires_in": 86400,  "token_type": "Bearer"}
```



Managing clusters with BigAnimal API

Managing clusters with BigAnimal API

<https://github.com/EnterpriseDB/blogpostings/tree/main/BigAnimal>

- Why Go?
 - Cloud native
 - Cross platform
- Steps
 - Authenticating
 - Provisioning
 - Listing
 - Deleting



Walk through example with BigAnimal
in Go

Takeaways

Takeaways

Where to from here?

Many routes and choices, a few to cite:

- Automation
- Pipelines
- Scheduling
- Templates

Sounds familiar, doesn't it?

Still doesn't ring a bell? Maybe this will ring: **DevOps**

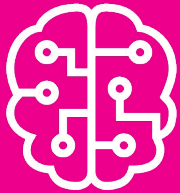
Your thoughts?



Q&A

Thank you!

BigAnimal: Faster, safer, smarter, better



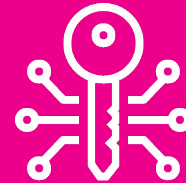
Postgres Expertise

Expertise beyond the generalist cloud provider; 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



Greater transparency and control

BigAnimal runs in your Azure account and leverages your existing discounts

Curious? Request a free trial today!

<https://resources.biganimal.com/cloud-postgresql-trial>

