

# React and Databasing: Basics of IBM Cloudant NoSQL DB

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**Bradston Henry**

Senior Developer, Developer Advocate | IBM North America Team

Workshop Materials Repo Link:

**[ibm.biz/react-cloudant-workshop-bradston](https://ibm.biz/react-cloudant-workshop-bradston)**

**IBM Developer**



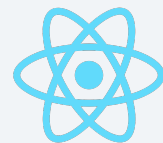
# About Me: Bradston Henry

## 7+ Years of Development and Industry Experience

- Mobile: iOS, React Native
- Web: React, JS/HTML/CSS
- Cloud: IBM Cloud, OpenShift, AWS
- Game Dev: Unity3D, Unreal(just a little)

## Hobbies

- Game Development
  - Itch.io, GMTK 2021, Android
- Gaming
  - Apex, Valheim, Super Marios Bros 3D Allstars
- Breakdancing/Bboying (Retired)
- MMA (Mixed Martial Arts)



# Agenda

- [Jellybean World App Overview/Demo](#)
- [IBM Cloudant Overview](#)
- [Jellybean App Architecture Overview](#)
- [Workshop/Code-a-long](#)

# Jellybean World App Overview

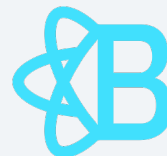
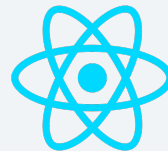
# Jellybean World App Overview

A simple application that allows you to create a small “jellybean based” world using a browser-based 2D-Physics engine.



## Tech Stack

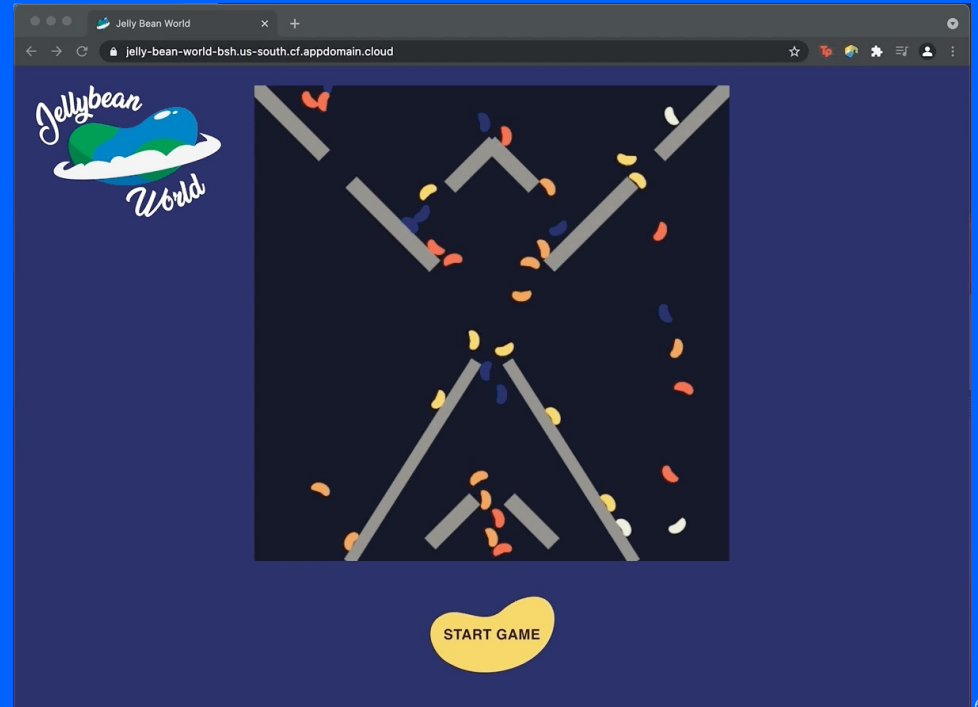
- Frontend: [ReactJS](#)
- Database/Backend: [IBM Cloudant](#) (Cloudant NoSQL DB)
- Middleware Server: [Node](#)
- Navigation: [React Router](#)
- Physics Engine: [Matter.js](#)
- Networking: [Axios](#) (HTTP Client)
- UI/Design Framework: [Material-UI](#)/[React Bootstrap](#)



# Jellybean World Demo

[Jellybean World Website](#)

\*link may not work after workshop



# IBM Cloudant Overview

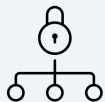
# IBM Cloudant Overview



## Features



- **Serverless:** Deploy an instance, create databases and independently scale throughput capacity and data storage to meet your application requirements.



- **Secure:** Encrypt all data, with optional user-defined encryption key management through IBM® Key Protect and integrate with IBM Identity and Access Management.



- **Global availability:** Get continuous availability as Cloudant distributes data across availability zones and 6 regions for app performance and disaster recovery requirements.



- **Powerful API:** Store JSON documents with an HTTP API. Enhance your applications with built-in key value, MapReduce, full-text search and geospatial querying.



- **Zero vendor lock-in:** Employ an open-source drop-in replacement — Apache CouchDB. You can deploy for hybrid or multicloud architectures.



- **Complaint:** Ensure compliance as Cloudant is ISO 27001 compatible and SOC 2 Type 2, PCI, GDPR and HIPAA compliant.



- **Durable replication:** Move app data closer to where it's needed for continuous data access. Build web apps, develop with an offline-first architecture or manipulate data at the edge.

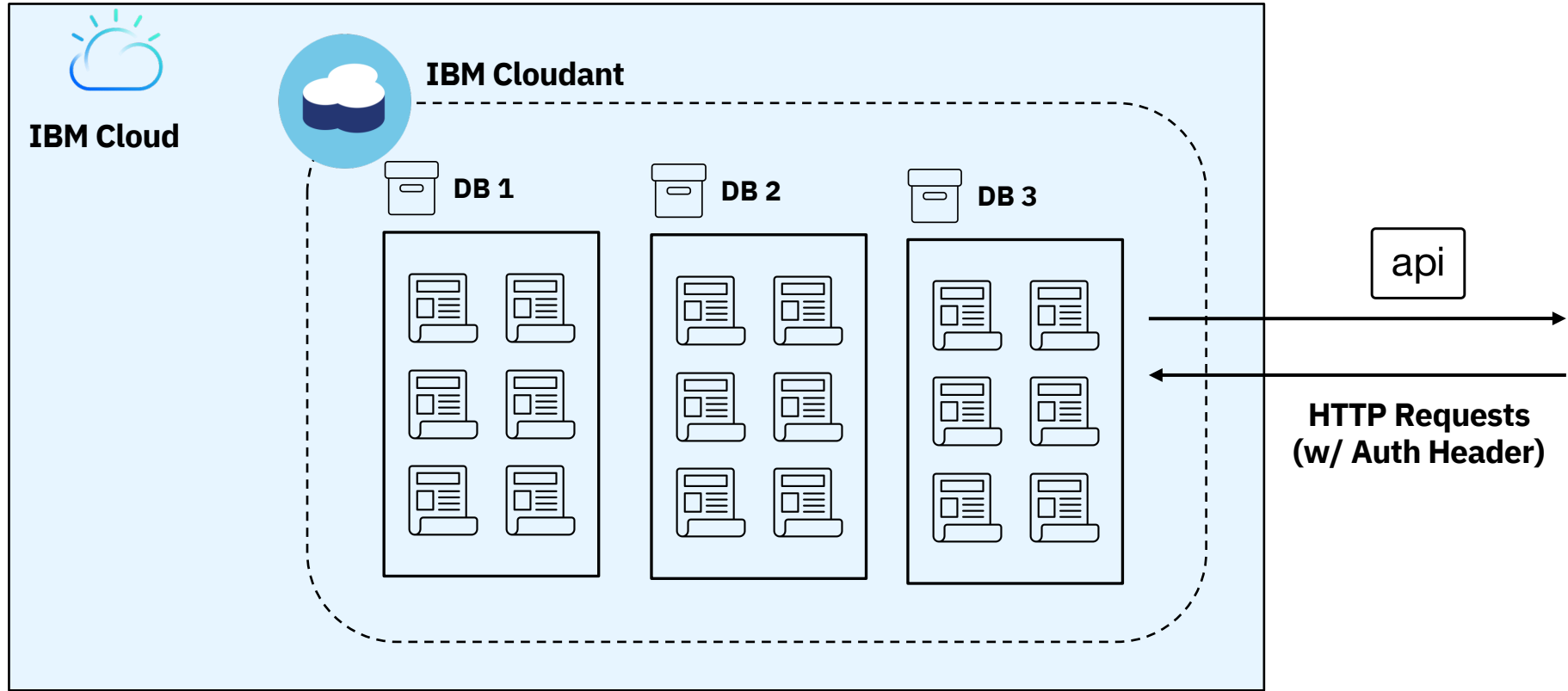


- **Cloudant Language Libraries:** Supported languages include Android, iOS, Java, Node.js, Python and Swift.

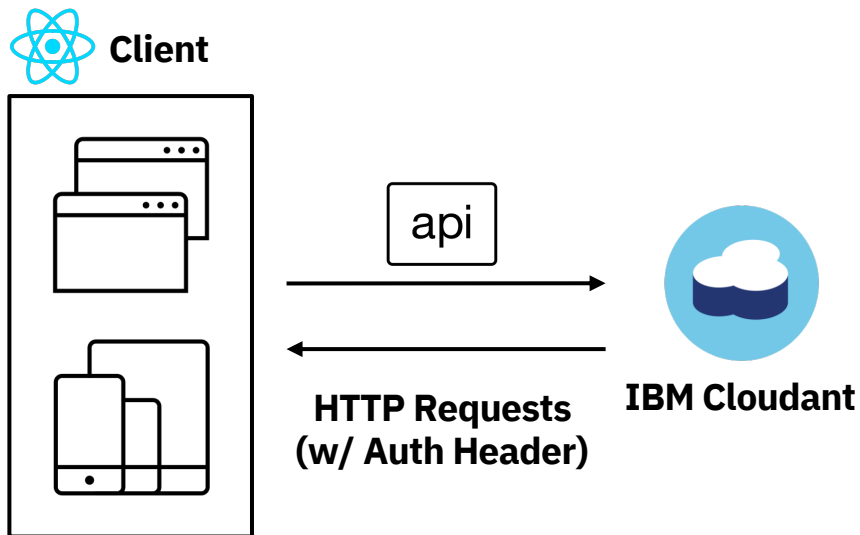
Learn More about IBM Cloudant [Here](#)



# Cloudant Simplified Architecture



# Cloudant API



## IBM Cloudant Request Types

- **GET**

Returns document with the specified 'doc\_id' from the specified database.

- **POST**

Creates or modifies a document in the specified database by using the supplied JSON

- **PUT**

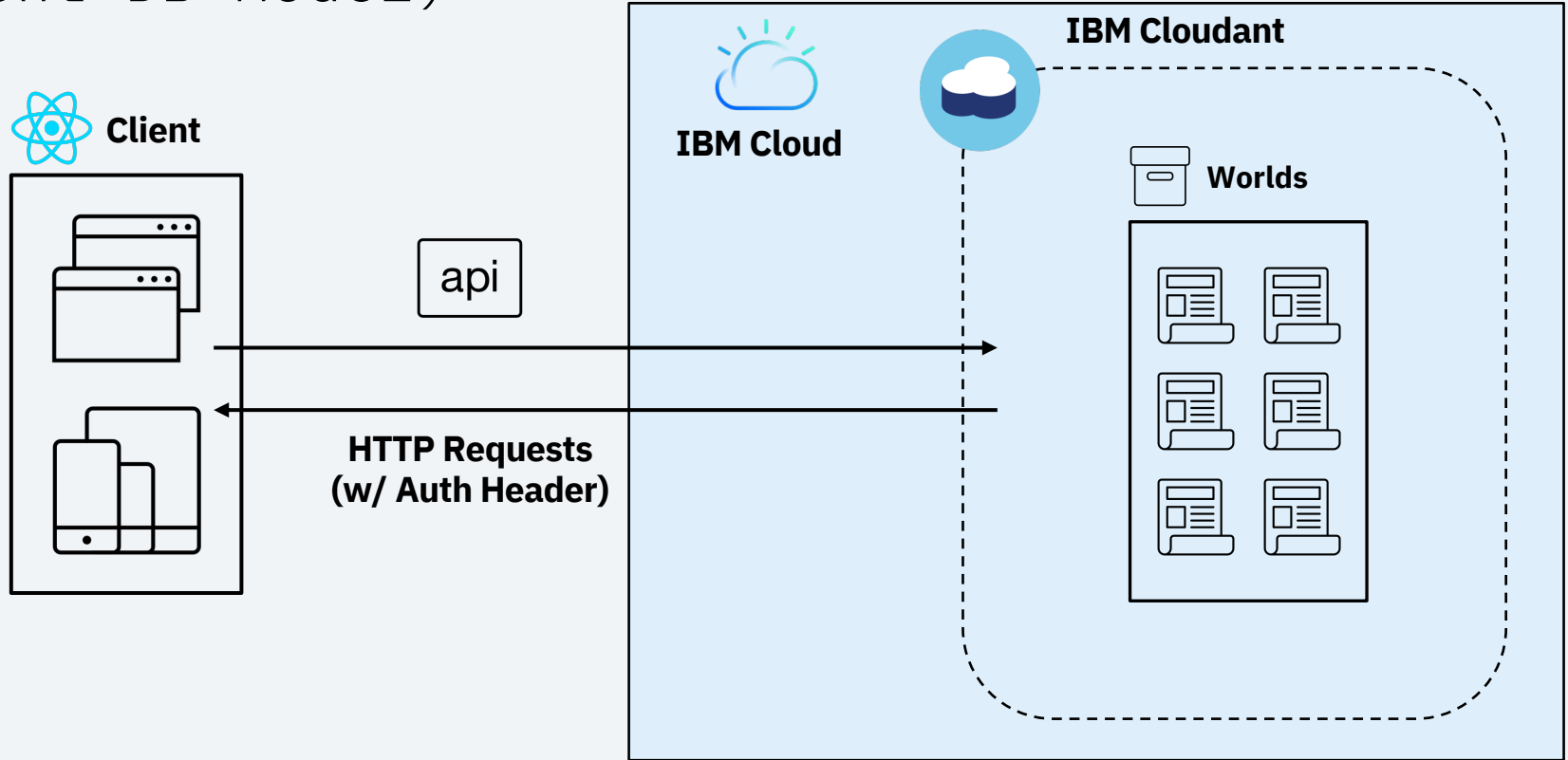
Creates a new named document, or creates a new revision of the existing document

- **DELETE**

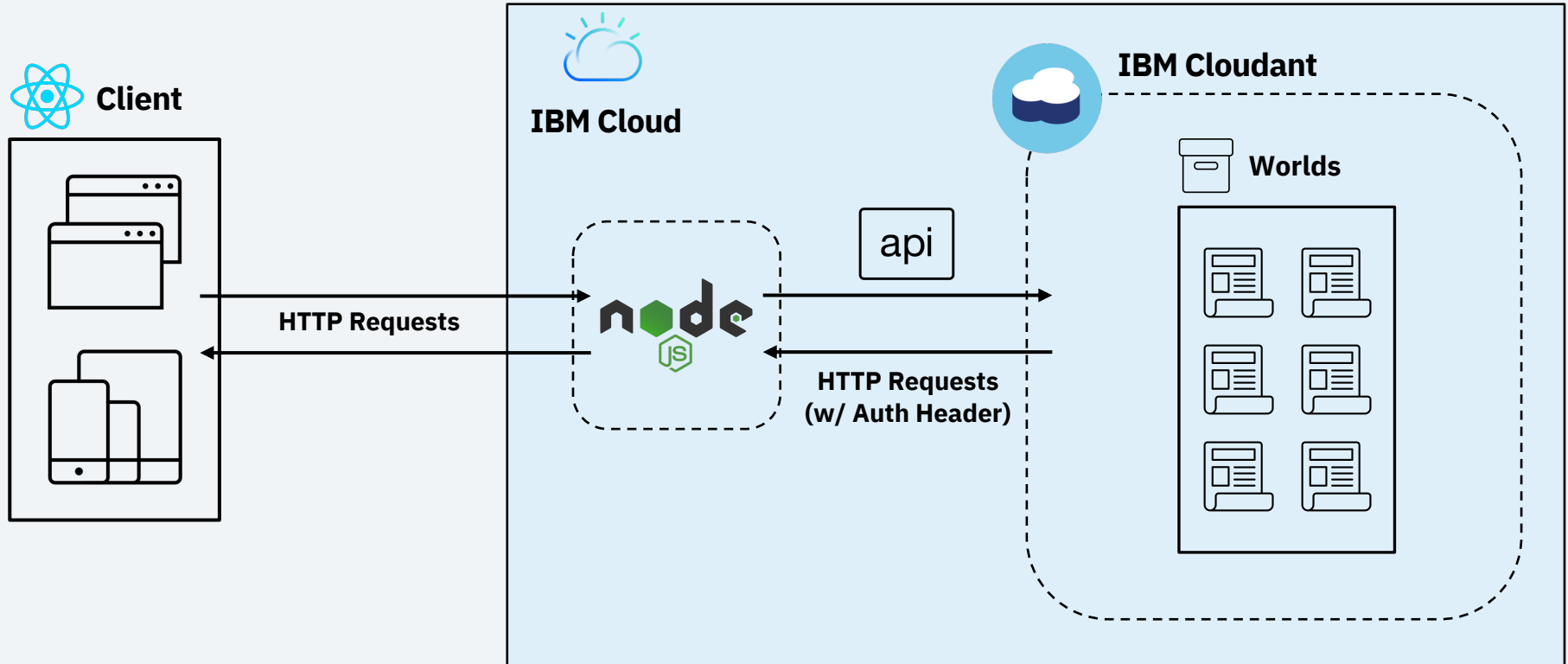
Marks the specified document as deleted by adding a `_deleted` field with the value `true`. Documents with this field are not returned within requests anymore but stay in the database

# Jellybean World App Architecture

# Jellybean World App Architecture (Client-DB Model)



# Jellybean World App Architecture (Client-Server-DB Model)



# Let's Do This!

# Before We Start

- [Sign up for IBM Cloud](#)
- [Download React Starter Code](#)
- [Download Node Starter Code](#)

**\*Visit Workshop [Github page](#) for all necessary links**



NOW...Let's  
Do This!



# Code-along

# Thank you for attending.

Bradston Henry

Senior Developer, Developer Advocate

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Twitter: [@bradstondev](https://twitter.com/bradstondev)

Youtube: [Bradston Henry](https://www.youtube.com/BradstonHenry)

Dev.to Blog: [@bradstondev](https://dev.to/bradstondev)

SPECIAL THANKS TO:

[Kyle Smith](#) (Created Visual Design Jellybean World App)

