# XTDB v2: An intro

# What is XTDB?

- document-oriented
- dynamic
- bitemporal

# document oriented and dynamic

```clojure
1 (xt/put :posts {:xt/id 1
2                 :post "Hello from Clojure meetup!"
3                 :comments ["Awesome!"]})
4
5 (xt/put :posts {:xt/id 2
6                 :post "Hello from Lisp meetup!"})
```

```sql
1 SELECT posts.post, posts.comments
2 FROM posts
```

```clojure
1 [{:post "Hello from Lisp meetup!"}
2  {:post "Hello from Clojure meetup!",
3   :comments ["Awesome!"]}]
```

# bitemporal

## product_prices

| id | price |
|----|-------|
| banana | 1.0 |
| apple | 2.0 |

# bitemporal

## product_prices

| id | price | created_at |
|---|---|---|
| banana | 1.0 | 2023-12-12 |
| apple | 2.0 | 2023-12-12 |

# bitemporal

## product_prices

| id | price | created_at | updated_at |
|---|---|---|---|
| banana | 1.0 | 2023-12-12 | 2023-12-12 |
| apple | 3.0 | 2023-12-12 | 2023-12-13 |

# bitemporal

## product_prices

| id | version | price | created_at |
|---|---|---|---|
| banana | 1 | 1.0 | 2023-12-12 |
| apple | 1 | 2.0 | 2023-12-12 |
| apple | 2 | 3.0 | 2023-12-13 |

# bitemporal

## product_prices

| id | price | created_at | updated_at |
|----|-------|------------|------------|
| banana | 1.0 | 2023-12-12 | 2023-12-12 |
| apple | 3.0 | 2023-12-12 | 2023-12-13 |

## product_prices_history

| id | price | created_at | superseded_at |
|----|-------|------------|---------------|
| apple | 2.0 | 2023-12-12 | 2023-12-13 |

# bitemporal
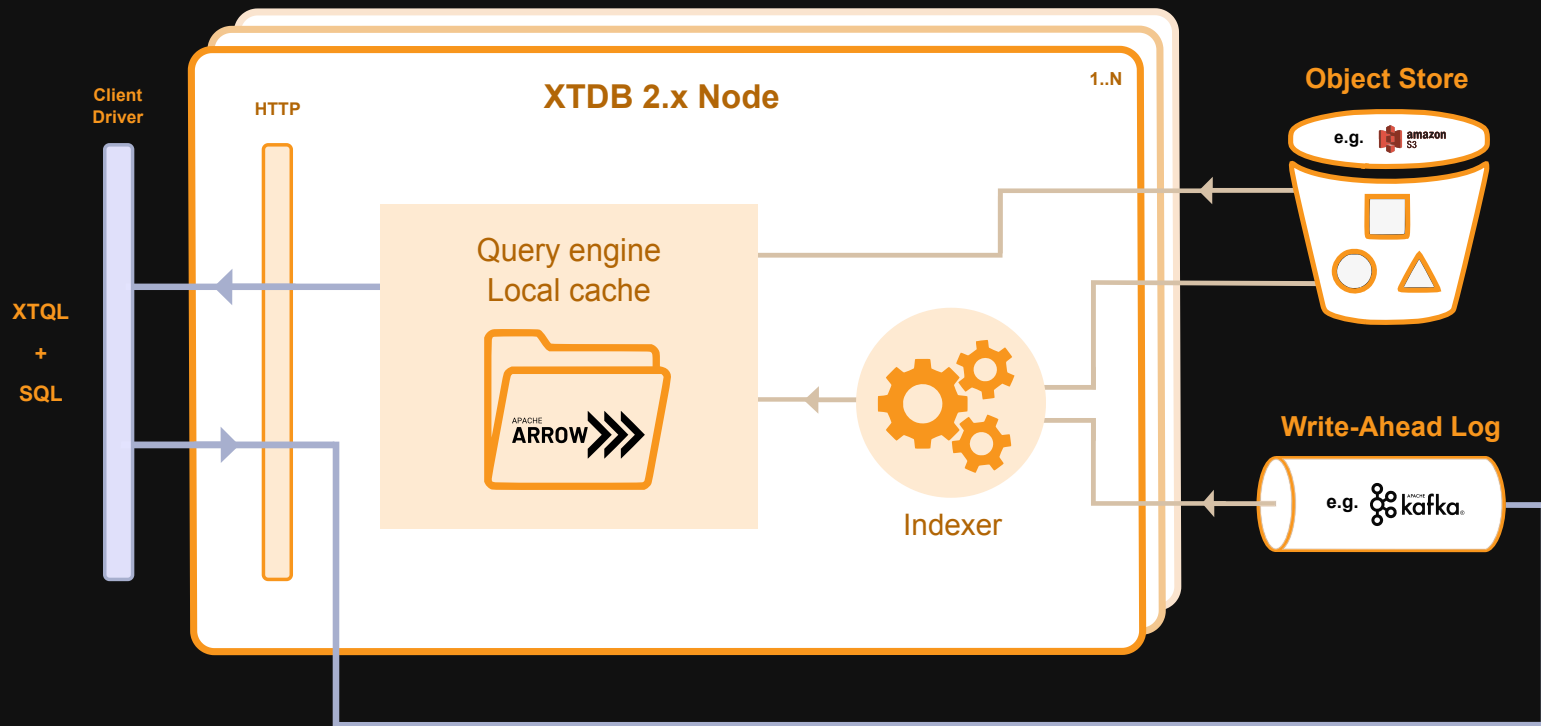
```sql
SELECT product.xt$id, product.price
FROM product
FOR ALL VALID_TIME
FOR ALL SYSTEM_TIME
WHERE product.xt$id = 'apple'
```

# bitemporal

## product_prices

| id | price |
|----|-------|
| banana | 1.0 |
| apple | 2.0 |

# Architecture

# What is new?

- Full SQL:2011 support
- storage vs compute
- full bitemporal support
- A new query language XTQL

# XTQL

- data oriented
- composable
- easily translates to JSON
- easy to learn

# Demo time

# Feedback

https://www.xtdb.com/v2

https://discuss.xtdb.com/