INTRODUCTION TO ELEPHANTDB

A DISTRIBUTED KEY/VALUE DATA STORE FOR EXPORTING DATA FROM HADOOP

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ANOTHER DATABASE? OH GOD WHY?!?!

Hadoop is good at batch processing lots of data. Making the the results of those batch calculation available to higher layers isn't straightforward.

This is what ElephantDB does. It is also the only thing that is does.

NOTABLE FEATURES

- Open source, originally created by **Nathan Marz** at BackType
- Written in **Clojure**
- Creation of the database index is completely disassociated from serving the index
- The server is read-only

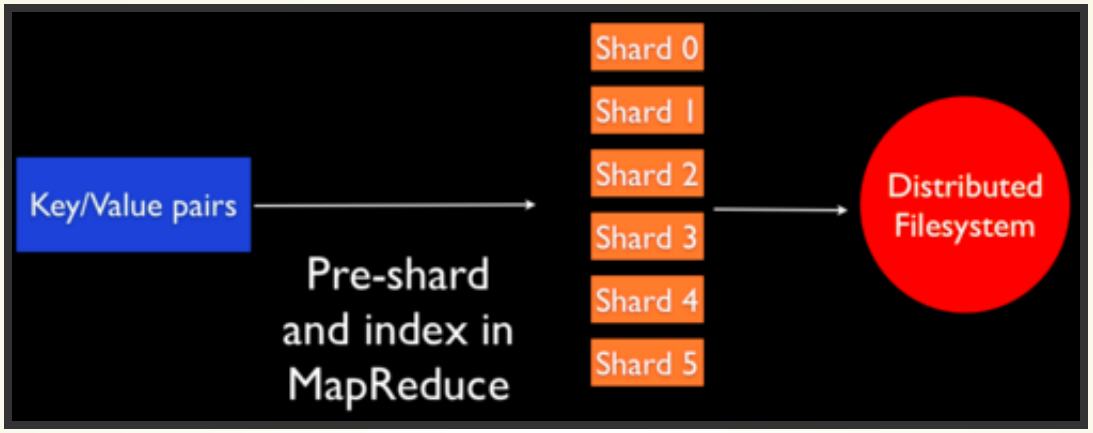
BENEFITS

- Simple.
- Easy to use.
- Trivially Scalable.

DOMAIN CREATION

- Hadoop Input/OutputFormat
- Provided **Cascading** and **Cascalog** taps
- Keys and values stored as byte arrays. Serialization left as an exercise to the reader
- Pluggable persistence engines. LevelDB and BerkeleyDB Java Edition are provided
- Domains are versioned.

DOMAIN CREATION



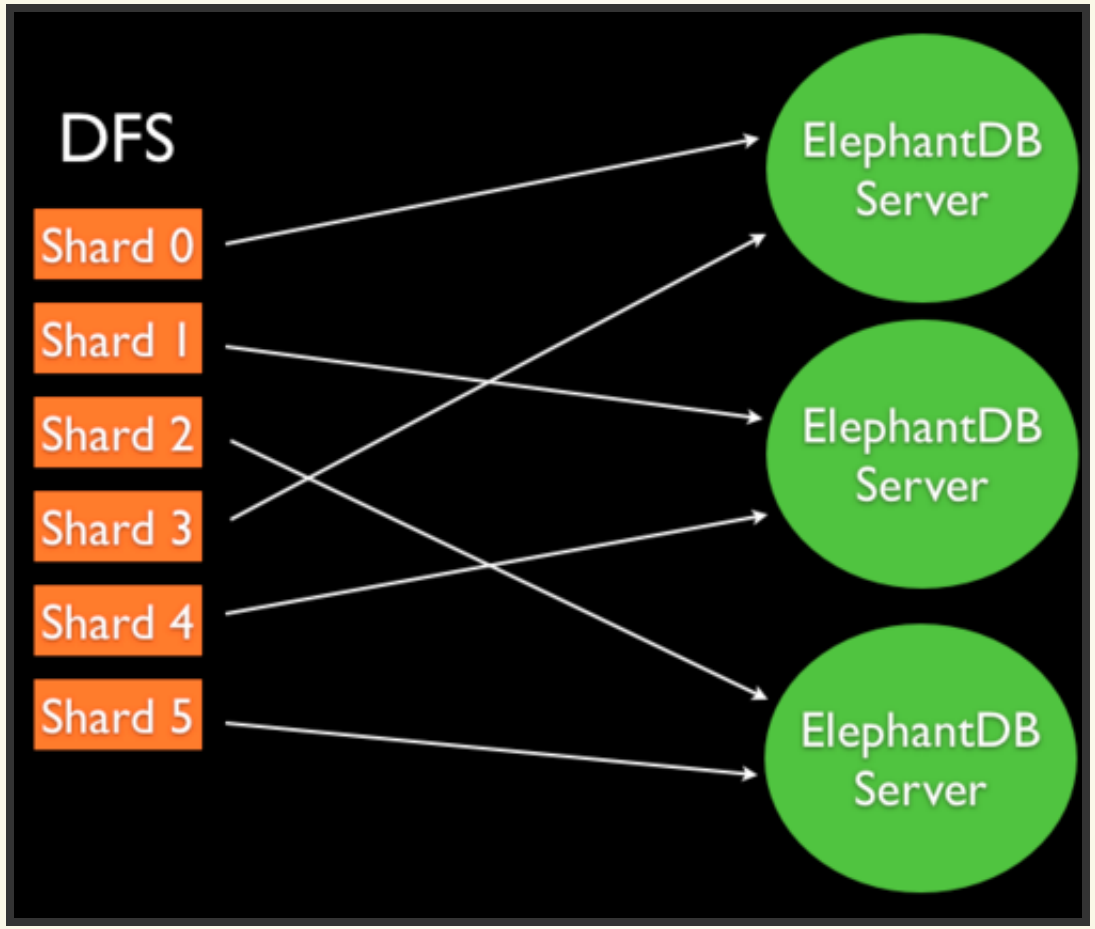
EXAMPLE DOMAIN-SPEC.YML

```
---
coordinator: elephantdb.persistence.LevelDB
persistence_opts: {}
shard_count: 60
shard_scheme: elephantdb.partition.HashModScheme
```

SERVING DOMAINS

- ElephantDB servers watch DFS for new versions of domains
- When a new version is available, servers automatically download and hotswaps in the latest version

SERVING DOMAINS



GETTING DATA

- **Thrift-based** interface
- Clojure and Python client provided
- `get` and `multiGet`

SIMPLE CLIENT INTERFACE

```
(with-elephant "ip.a.b.c" 3578 client
  (multi-get client "some-domain" [k1 k2 k3 k4]))

=> {k1 v1, k2 v2, k3 v3, k4 v4}
```

IN PRODUCTION AT YIELDBOT

- 8 m1.xlarge instance cluster
- 500GB of data (compressed)

GITHUB

https://github.com/nathanmarz/elephantdb

QUESTIONS?

YIELDBOT IS HIRING!

http://yieldbot.com/jobs