INF FAKULTÄT FÜR INFORMATIK

Kick-Off-Presentation. Build Your Own Octopus(OctopusDB)

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Scientific Project: Databases for Multi-Dimensional Data, Genomics and Modern Hardware

April 25, 2017

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Motivation

Modern enterprises need to pick the right DBMSs for their data managing problems.

[1] A. Jindal. The Mimicking Octopus: Towards a one-size-fits-all Database Architecture, 2010

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   → compromise heavily on performance. [1]

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Idea of OctopusDB

Create a new type of database system without fixed store that will mimic several existing systems.

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- Storage Views

Like "real" octopus can mimic other creatures and adjust to the environment

Idea of OctopusDB

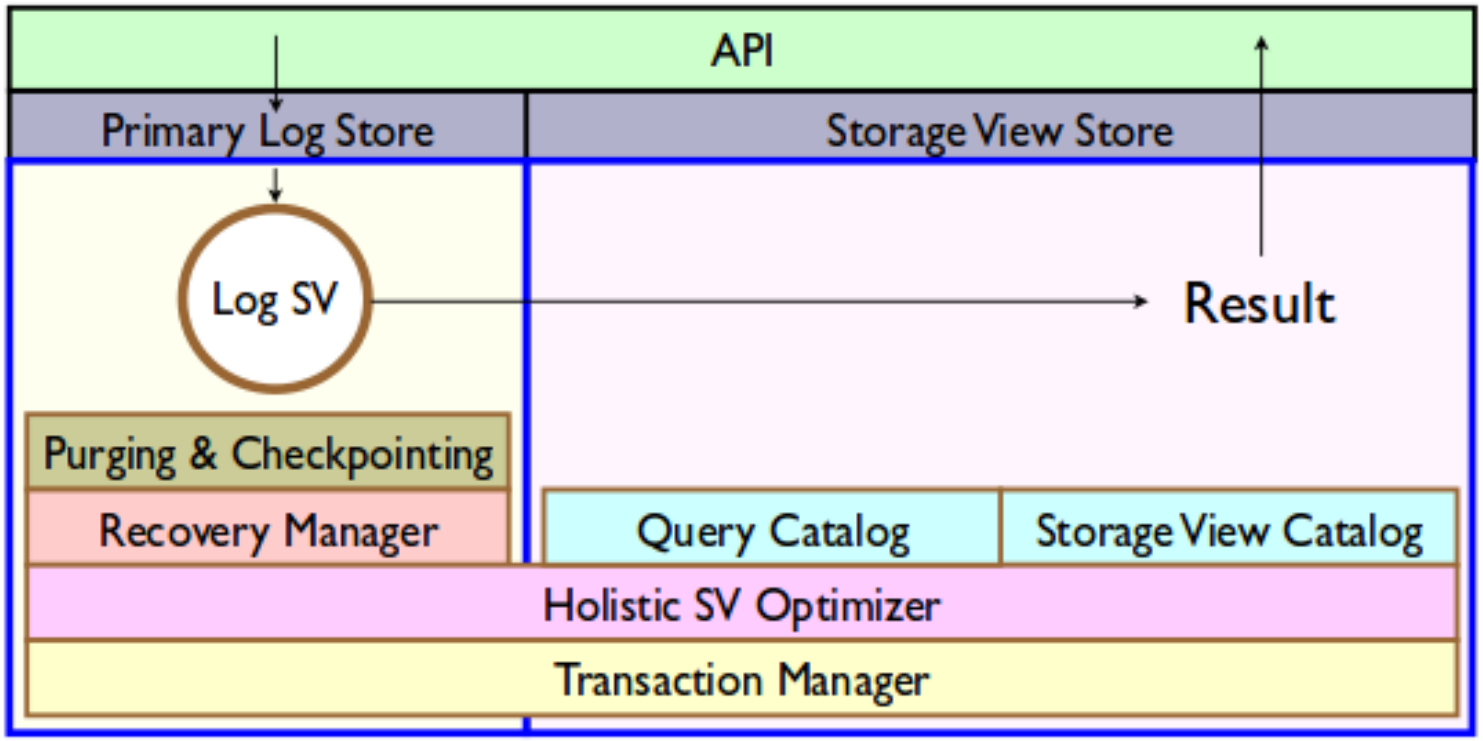

Figure 1: OctopusDB Architecture

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[2] A. Jindal. The Mimicking Octopus: Towards a one-size-fits-all Database Architecture, 2010

Our Goal

- Not to **clone** OctopusDB

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- Provide a **framework** that gives user a chance to act as *Holistic SV Optimizer* and evaluate the results

Our Vision

Project Organisation.Schedule

Milestones

02.05.2017	MS-I (Kick-Off)
23.05.2017	MS-II (Concepts)
13.06.2017	MS-III (Implementation)
04.07.2017	MS-IV (Final)

Meetings

Team Meetings: Mo 14-15
Meetings with supervisor: We 10-11

Project Organisation.Roles

Team:

Ali H. -
Ali M. -
Guzel -
Pavlo -

Supervisor:

Gabriel Campero Durand

Changing roles after each milestone.

Thank you for your attention! Any questions?

Literature

1. Jindal, Alekh. "The mimicking octopus: Towards a one-size-fits-all database architecture." VLDB PhD Workshop. 2010.
2. Dittrich, Jens, and Alekh Jindal. "Towards a One Size Fits All Database Architecture." CIDR. 2011.
3. Jindal, Alekh. "OctopusDB: flexible and scalable storage management for arbitrary database engines." (2012).
4. Idreos, Stratos, Martin L. Kersten, and Stefan Manegold. "Database Cracking." In CIDR, vol. 7, pp. 68-78. 2007.
5. Mozafari, Barzan. "Approximate query engines: Commercial challenges and research opportunities." SIGMOD, 2017.