

Goal

magicthegathering.io provides up-to-date information regarding all MTG trading cards available:

https://docs.magicthegathering.io/ "card":{ "name":"Manta Riders", E.g. https://api.magicthegathering.io/v1/cards/4711 "manaCost":"{U}", "cmc":1. "colors": "Blue" "colorIdentity":[Manta Riders "type": "Creature — Merfolk", "types":["Creature" "subtypes": "rarity":"Common", "set":"TMP". Summon Merfolk "setName":"Tempest", "text":"{U}: Manta Riders gains flying until end of turn.", . Manta Riders gains flying until "flavor":"\"Water is firmament to the finned.\"\n—Oracle en-Vec", end of turn. "artist":"Kaja Foglio", "Water is firmament to the finned." "power":"1", -Oracle en-Véc "toughness":"1", "layout": "normal", "multiverseid":4711. "imageUrl": "http://gatherer.wizards.com/Handlers/Image.ashx?multiverseid=4711&type= card",

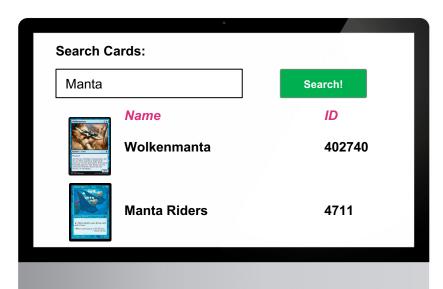


Goal

We want to make use of this data to build a searchable database of all MTG trading cards.

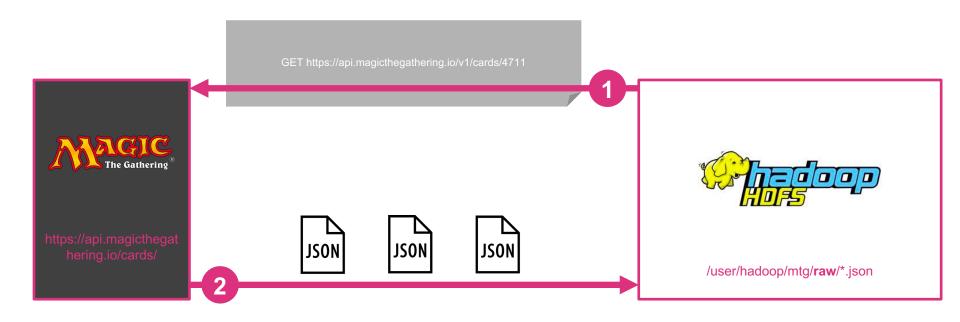
Workflow:

- Gather data from api.magicthegathering.io
- Save raw data (JSON files) to HDFS
- Optimize, reduce and clean raw data and save it to final directory on HDFS
- Export MTG data to end-user database (e.g. MySQL, MongoDB...)
- Provide a simple HTML Frontend which is able to:
 - read from end-user database
 - process user input (card name, text or artist)
 - display search results
- The whole data workflow must be implemented within an ETL workflow tool (e.g. Pentaho Data Integration or Airflow) and run automatically





Dataflow: 1. Get MTG Data



Dataflow: 2. Raw To Final Transfer





- move data from raw to final directory
- optimize and reduce data structure for later query purposes if necessary
- remove duplicates if necessary
- ...



/user/hadoop/mtg/final/*



Dataflow: 3. Enhance Data And Save Results









- enhance data (e.g. for later querying)
- use Hive, Spark or PySpark
- save everything to a enduser database (e.g. MySQL, MongoDB)







Dataflow: 4. Provide Simple Web Interface

