



# Where's my stuff?

Modernizing your application with Search

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# Agenda

1 Introduction to Elasticsearch

2 Integrating Elasticsearch with your application

3 Elasticsearch under the hood

# Use cases

## Full text search

### Polski

*Wolna encyklopedia*

1 106 000+ haseł

### Português

*A enciclopédia livre*

871 000+ artigos

javascri

English

JavaScript

JavaScriptCore

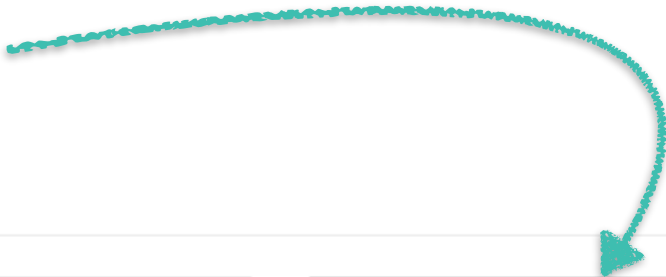
JavaScript library

JavaScript engine

uage:

# Use cases

## Structured search



meteor / meteor

Watch ▾

1,558

★ Star

25,851

Y Fork

Issues

**Pull requests**

Labels

Milestones

Filters ▾



is:open is:pr author:glasser

New pull request

✕ Clear current search query, filters, and sorts

🔗 1 Open ✓ 12 Closed

Author ▾

Labels ▾

Milestones ▾

Assignee ▾

Sort ▾

🔗 Fix packages on Object prototype extension ✓ Project:JS Environment

# Use cases

## Faceted navigation



### Stops

- ☒ nonstop \$117
- ☒ 1 stop ▼ \$163
- ☒ 2+ stops \$192

### Times

Take-off Prague (PRG)

Fri 1:00a - 9:30p



Take-off Amsterdam (AMS)

Sat 12:00a - Sun 12:00a



Show landing times ▼

### Airports

Show all

☐ Depart/Return same

Sort by: **Price** Recommended Duration More ▼

Round-trip | Segment

 **asaptickets.com**  
(888) 420-1621

### \$397: U.S. to Amsterdam

Save 30-50% Off Major Airlines. Call for a Free Quote Now and Save!  
24/7 Live Service · BBB A+ Rating · High Client Trustscore 9+  
Brands: Iceland Air, Turkish, Ukraine Airlines

ads



~~\$147~~  
**\$117**  
easyJet

Save up to 21%

View Deal



easyJet

**12:55p** PRG → **2:30p** AMS 1h 35m nonstop

**10:55a** AMS → **12:25p** PRG 1h 30m nonstop

Show details

Economy



~~\$155~~  
**\$125**  
easyJet

Save up to 20%

View Deal



easyJet

**8:45p** PRG → **10:25p** AMS 1h 40m nonstop

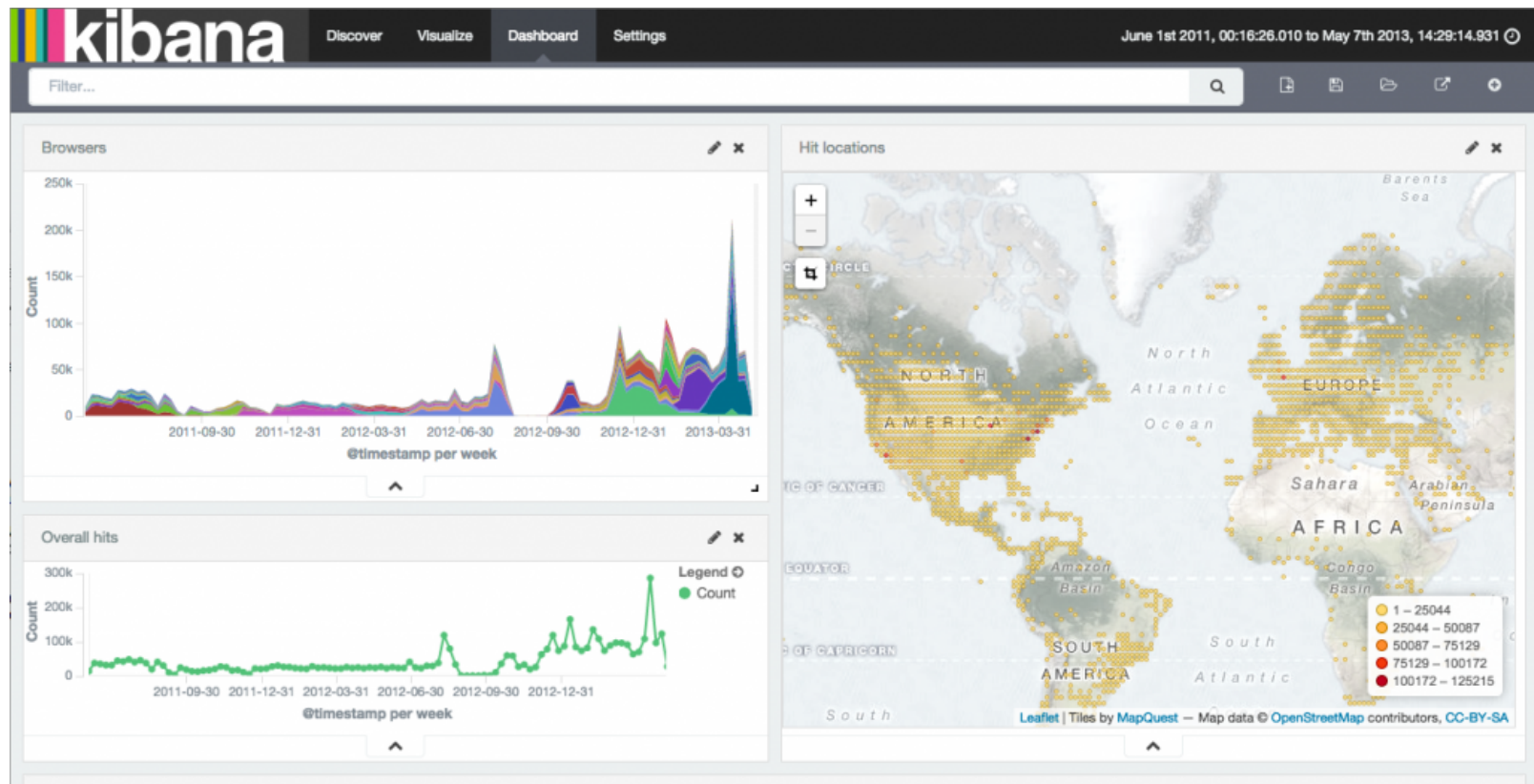
**10:55a** AMS → **12:25p** PRG 1h 30m nonstop

Show details

Economy

# Use cases

## Analytics



# Features

- Document-oriented search and analytics engine
  - JSON-based, built on top of Apache Lucene
- Schema Free
  - Yet enables control of it when needed
- Distributed
  - Scales horizontally, highly available
- HTTP API-centric
  - Most functionality is exposed through an HTTP API

# Concepts

## Document

- Unit of your data fed into or retrieved from Elasticsearch
- Specified in JSON format

## Index

- Collection of similar documents

## Type

- Category of document within an index



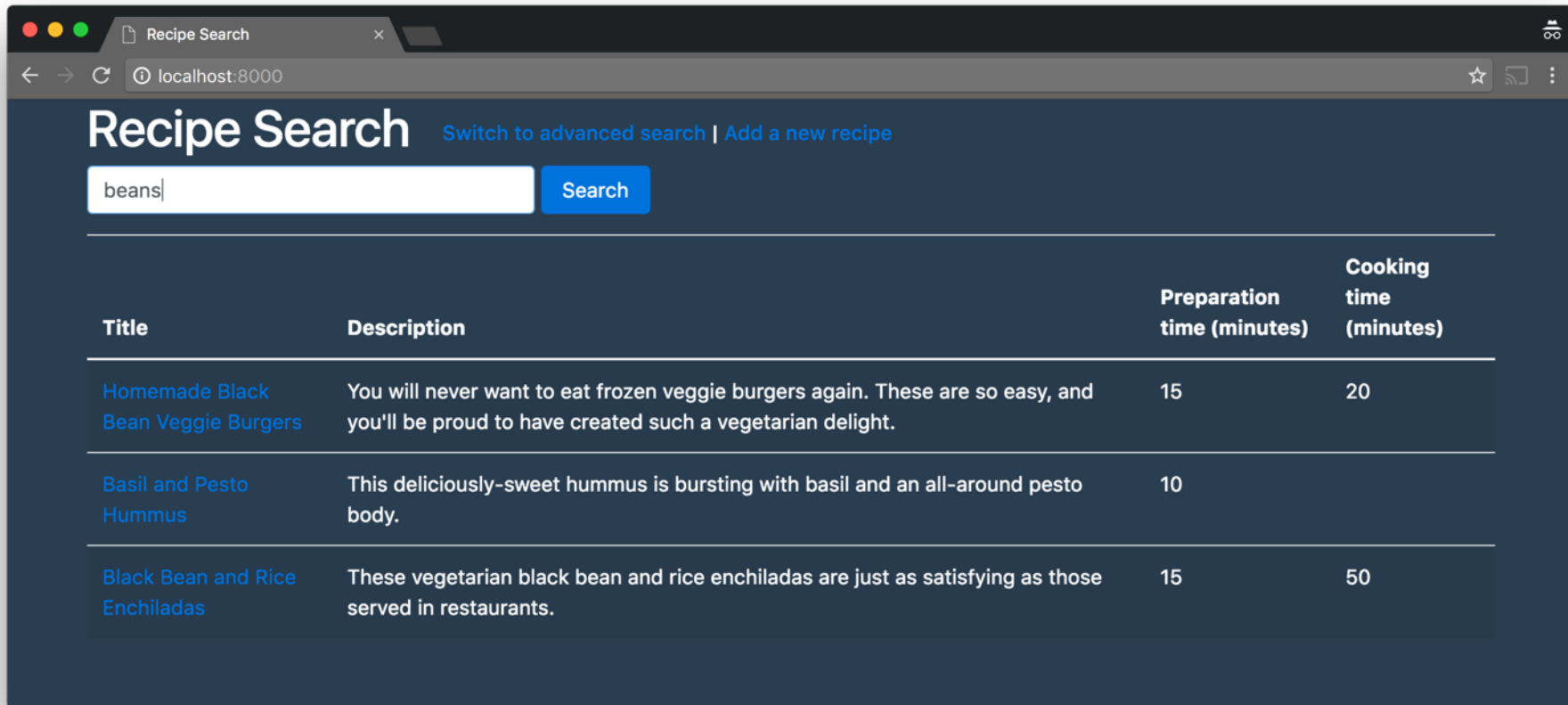
# Agenda

1 Introduction to Elasticsearch

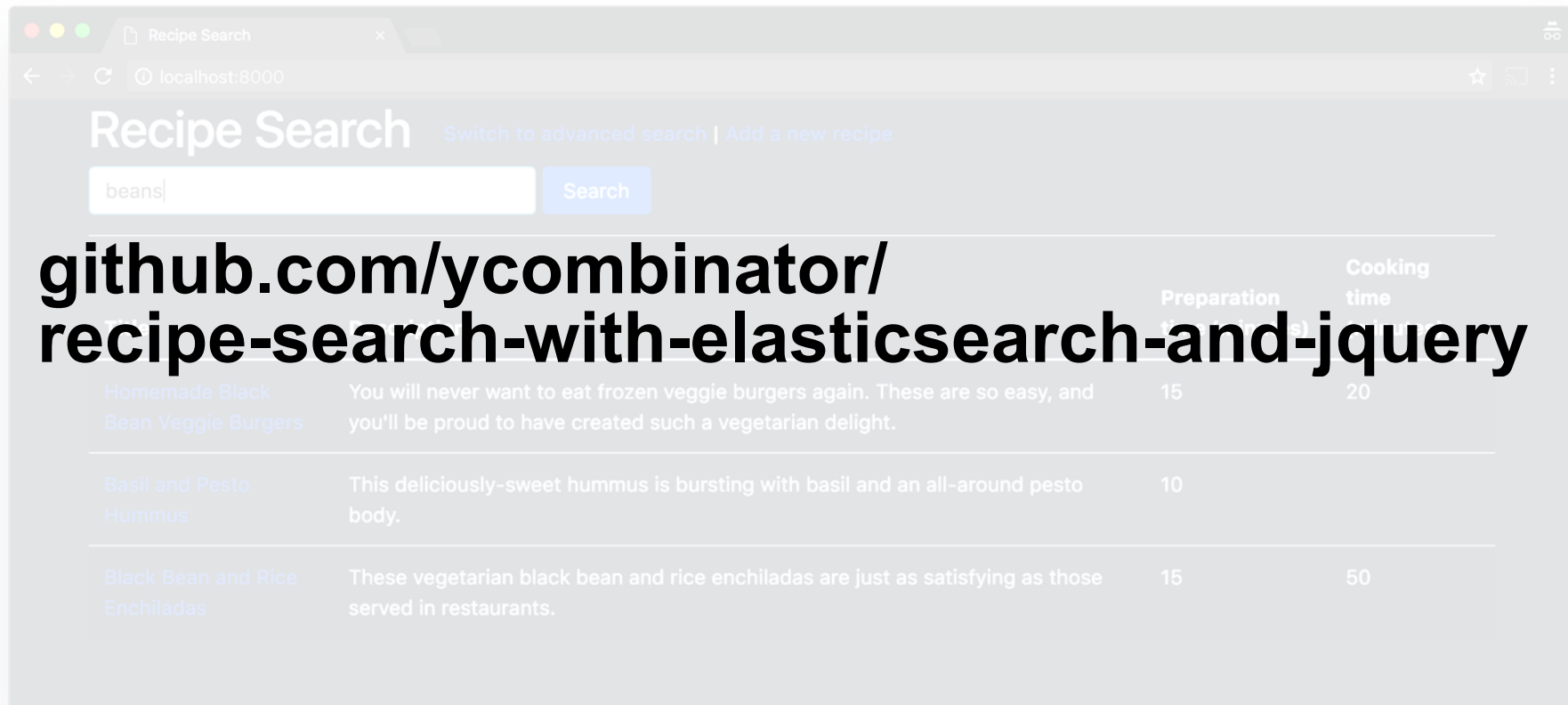
2 Integrating Elasticsearch with your application

3 Elasticsearch under the hood

# Live demo



# Live demo



Recipe Search [Switch to advanced search](#) | [Add a new recipe](#)

beans

## github.com/ycombinator/ recipe-search-with-elasticsearch-and-jquery

		Preparation time (minutes)	Cooking time (minutes)
<a href="#">Homemade Black Bean Veggie Burgers</a>	You will never want to eat frozen veggie burgers again. These are so easy, and you'll be proud to have created such a vegetarian delight.	15	20
<a href="#">Basil and Pesto Hummus</a>	This deliciously-sweet hummus is bursting with basil and an all-around pesto body.	10	
<a href="#">Black Bean and Rice Enchiladas</a>	These vegetarian black bean and rice enchiladas are just as satisfying as those served in restaurants.	15	50

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- 1 Introduction to Elasticsearch
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# Concepts



## Shard

- A part of an index, consisting of a subset of documents in that index



## Node

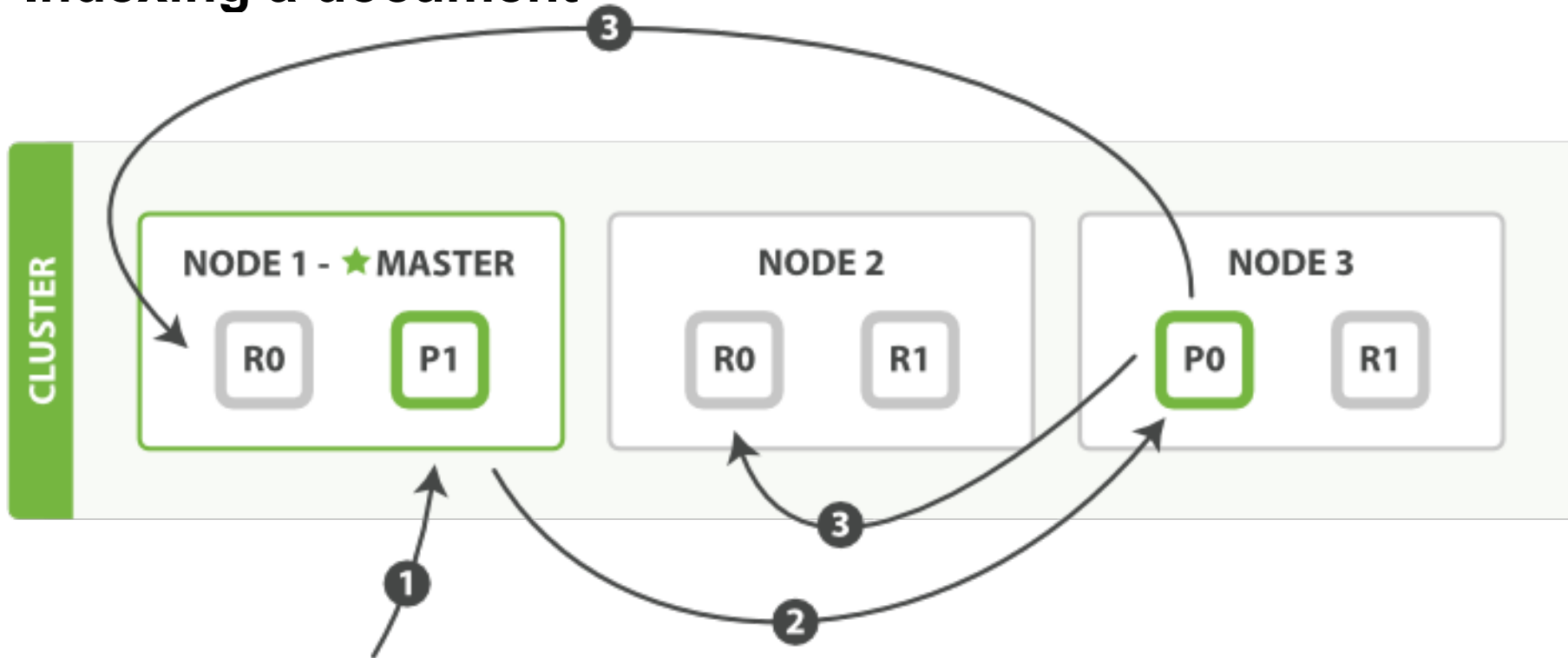
- A running Elasticsearch process



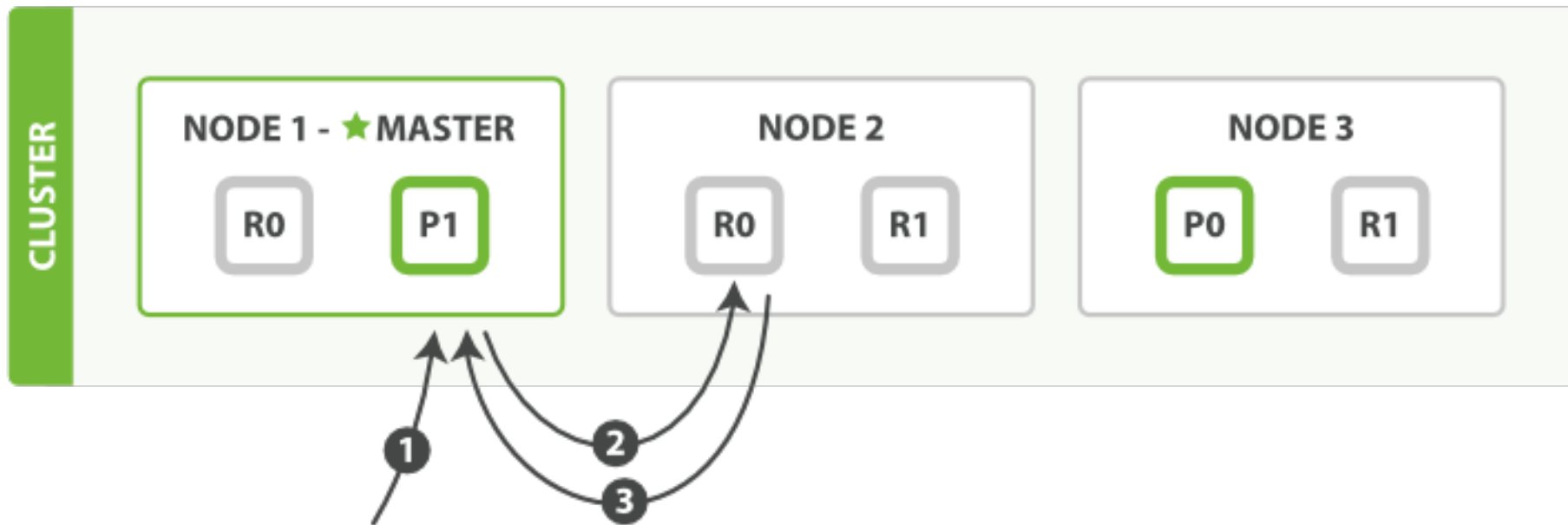
## Cluster

- A collection of nodes that can communicate with each other *and* share the same `cluster.name`

# Indexing a document

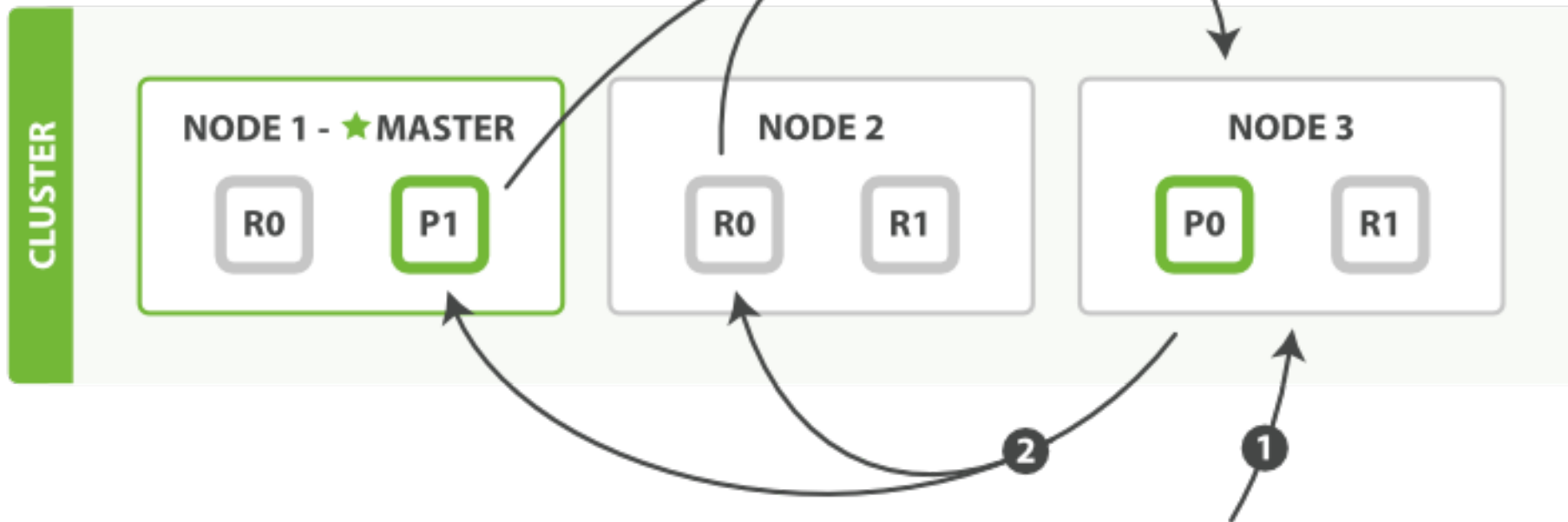


# Retrieving a document



# Searching for documents

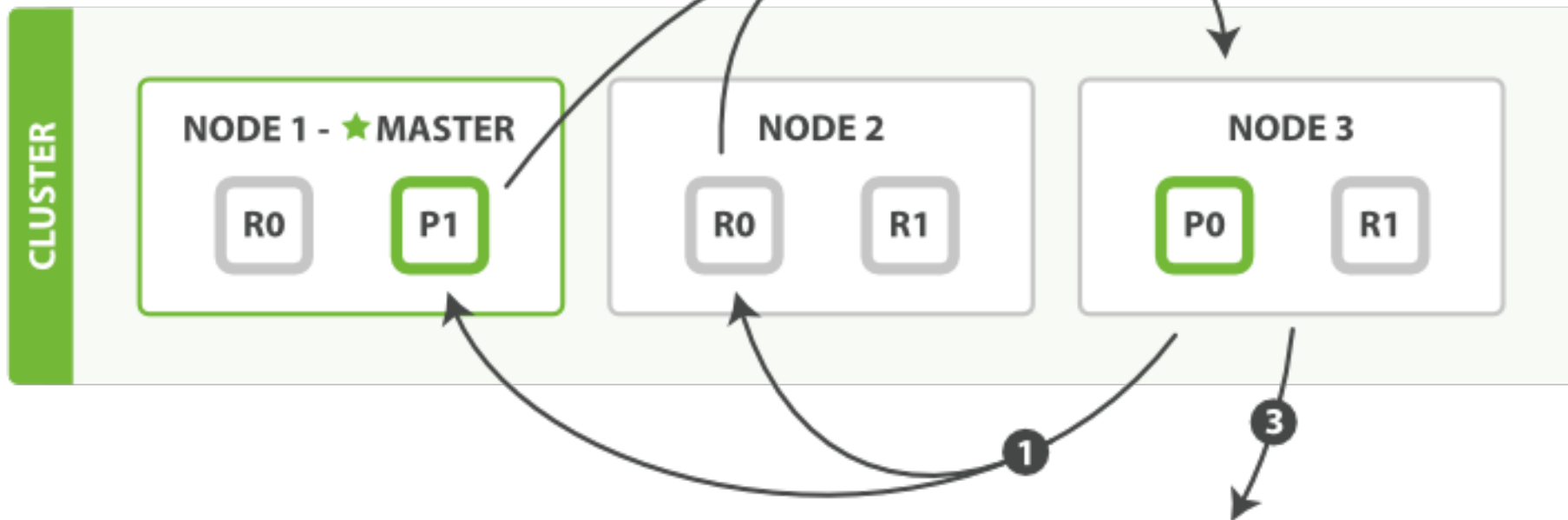
## Query Phase





# Searching for documents

## Fetch Phase



# Summary

- 1 Introduction to Elasticsearch
- 2 Integrating Elasticsearch with your application
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THANK  
YOU  
THANK  
YOU  
THANK  
YOU

# Questions?

@shaunak