Bleve

Full-Text Indexing and Search for Go

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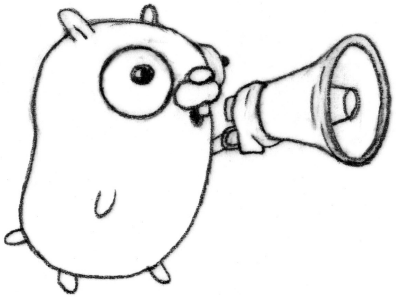
Marty Schoch

Why?

- Lucene/Solr/Elasticsearch are awesome
- Could we build 50% of Lucene's text analysis, combine it with off-the-shelf KV stores and get something interesting?

Install bleve



go get github.com/blevesearch/bleve/...

Import

```
10 import "github.com/blevesearch/bleve"
11
12 type Person struct {
13     Name string
14 }
15
16 func main() {
17     mapping := bleve.NewIndexMapping()
18     index, err := bleve.New("people.bleve", mapping)
19     if err != nil {
20         log.Fatal(err)
21     }
22
23     person := Person{"Marty Schoch"}
24     err = index.Index("m1", person)
25     if err != nil {
26         log.Fatal(err)
27     }
28     fmt.Println("Indexed Document")
29 }
```

Data Model

```
10 import "github.com/blevesearch/bleve"
11
12 type Person struct {
13     Name string
14 }
15
16 func main() {
17     mapping := bleve.NewIndexMapping()
18     index, err := bleve.New("people.bleve", mapping)
19     if err != nil {
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21     }
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23     person := Person{"Marty Schoch"}
24     err = index.Index("m1", person)
25     if err != nil {
26         log.Fatal(err)
27     }
28     fmt.Println("Indexed Document")
29 }
```

Index Mapping

```
10 import "github.com/blevesearch/bleve"
11
12 type Person struct {
13     Name string
14 }
15
16 func main() {
17     mapping := bleve.NewIndexMapping()
18     index, err := bleve.New("people.bleve", mapping)
19     if err != nil {
20         log.Fatal(err)
21     }
22
23     person := Person{"Marty Schoch"}
24     err = index.Index("m1", person)
25     if err != nil {

26         log.Fatal(err)
27     }
28     fmt.Println("Indexed Document")
29 }
```

Create a New Index

```
10 import "github.com/blevesearch/bleve"
11
12 type Person struct {
13     Name string
14 }
15
16 func main() {
17     mapping := bleve.NewIndexMapping()
18     index, err := bleve.New("people.bleve", mapping)
19     if err != nil {
20         log.Fatal(err)
21     }
22
23     person := Person{"Marty Schoch"}
24     err = index.Index("m1", person)

25     if err != nil {
26         log.Fatal(err)
27     }
28     fmt.Println("Indexed Document")
29 }
```

Index Data

```
10 import "github.com/blevesearch/bleve"
11
12 type Person struct {
13     Name string
14 }
15
16 func main() {
17     mapping := bleve.NewIndexMapping()
18     index, err := bleve.New("people.bleve", mapping)
19     if err != nil {
20         log.Fatal(err)
21     }
22
23     person := Person{"Marty Schoch"}
24     err = index.Index("m1", person)
25     if err != nil {
26         log.Fatal(err)
27     }
28     fmt.Println("Indexed Document")
29 }
```

Run

Open Index

```
15 func main() {
16     index, err := bleve.Open("people.bleve")
17     if err != nil {
18         log.Fatal(err)
19     }
20
21     query := bleve.NewTermQuery("marty")
22     request := bleve.NewSearchRequest(query)
23     result, err := index.Search(request)
24     if err != nil {
25         log.Fatal(err)
26     }
27     fmt.Println(result)
28 }
```

Build Query

```
15 func main() {
16     index, err := bleve.Open("people.bleve")
17     if err != nil {
18         log.Fatal(err)
19     }
20
21     query := bleve.NewTermQuery("marty")
22     request := bleve.NewSearchRequest(query)
23     result, err := index.Search(request)
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26     }
27     fmt.Println(result)
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Build Request

```
15 func main() {
16     index, err := bleve.Open("people.bleve")
17     if err != nil {
18         log.Fatal(err)
19     }
20
21     query := bleve.NewTermQuery("marty")
22     request := bleve.NewSearchRequest(query)
23     result, err := index.Search(request)
24     if err != nil {
25         log.Fatal(err)
26     }
27     fmt.Println(result)
28 }
```

Search

```
15 func main() {
16     index, err := bleve.Open("people.bleve")
17     if err != nil {
18         log.Fatal(err)
19     }
20
21     query := bleve.NewTermQuery("marty")
22     request := bleve.NewSearchRequest(query)
23     result, err := index.Search(request)
24     if err != nil {
25         log.Fatal(err)
26     }
27     fmt.Println(result)
28 }
```

Run

Query Strings

Simple query language for humans

```
+content:debugger word_count:>30
```

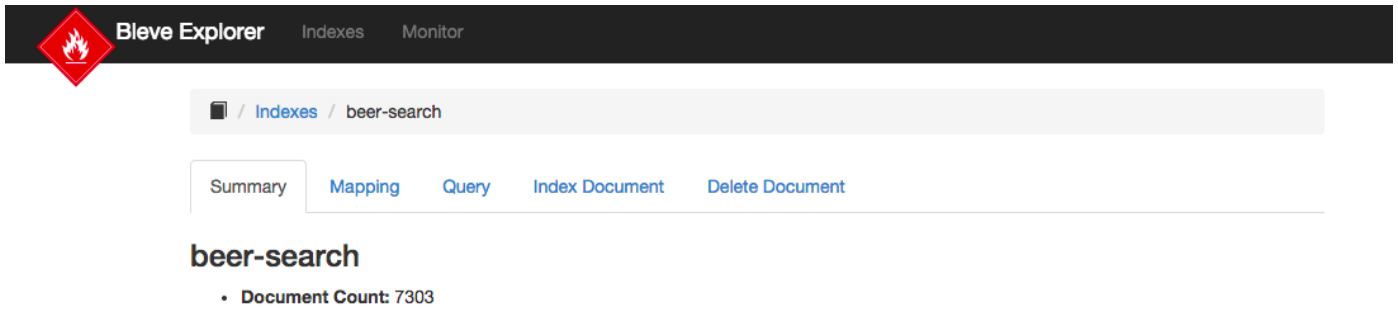
```
title:"delve debugger" title:go~2 -content:rust
```

Optional HTTP Handlers

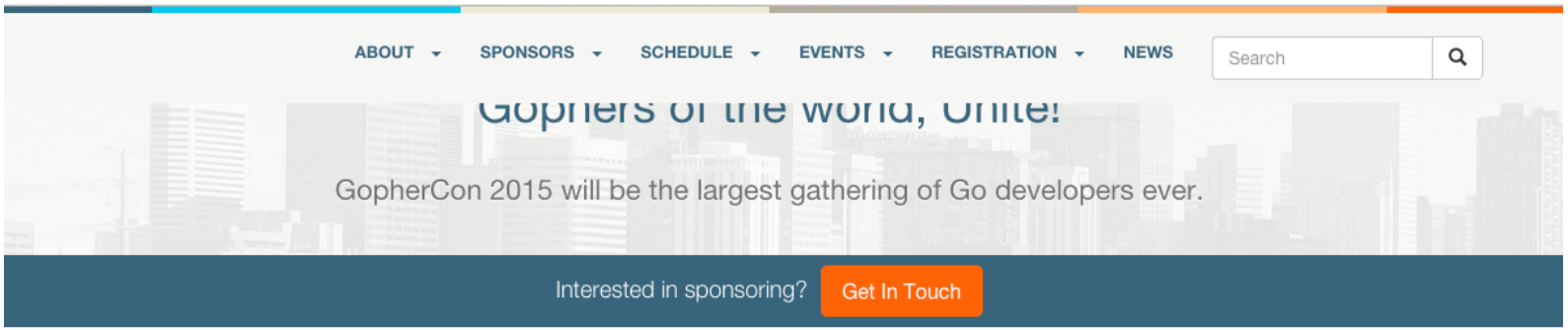
```
import "github.com/blevesearch/bleve/http"
```

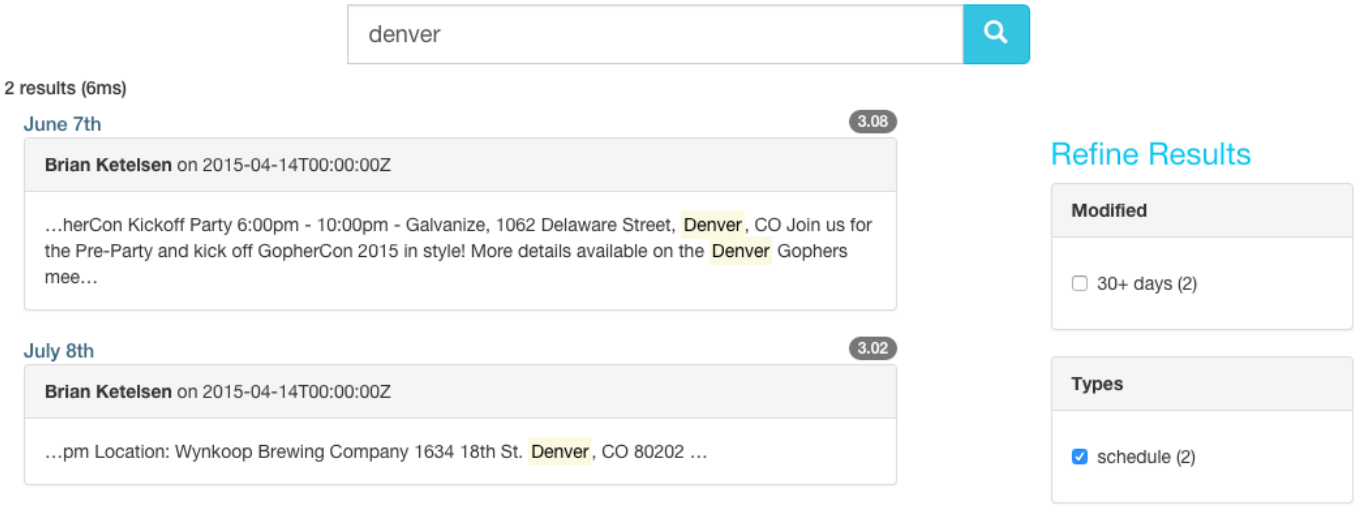
- All major bleve operations mapped
- Assume JSON document bodies
- See bleve-explorer sample app

```
https://github.com/blevesearch/bleve-explorer
```



GopherCon Site Search





Join the Community

freenode

- #bleve is small/quiet room, talk to us real time

Google groups

- Discuss your use-case
- Plan a feature implementation

GitHub

- Apache License v2.0, Report Issues, Submit Pull Requests

Thank you

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