

Taming Failures by Partitioning Time and Space

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Playframework Co-creator

@sadache



prismic.io, a snappy tour



Building a Website with dynamic content is a pain

No content management

Use a visual builder tool

Use CMS building blocks and plugins

```
<style>
  h1 { font-family: 'Aller' }
</style>
<h1>
  Change your world now!
</h1>
```



rfay

- o My account
- ▶ Create content
- ▼ Administer
 - ▶ Content management
 - ▶ Site building
 - ▼ Site configuration
 - o Actions
 - o Administration theme
 - o Clean URLs
 - o Date and time
 - o Devel settings
 - o Error reporting
 - o File system
 - o IMCE
 - o Image toolkit
 - o ImageAPI

Home » Administer » Site configuration

Wysiwyg

Profiles can be defined based on user roles and editor capability, what buttons or toolbar functions are visible in the editor. Lastly, only users with the Editor role can edit content.

- ▶ Basic setup
- ▶ Editor appearance
- ▶ Cleanup and output
- ▶ CSS

Create profile

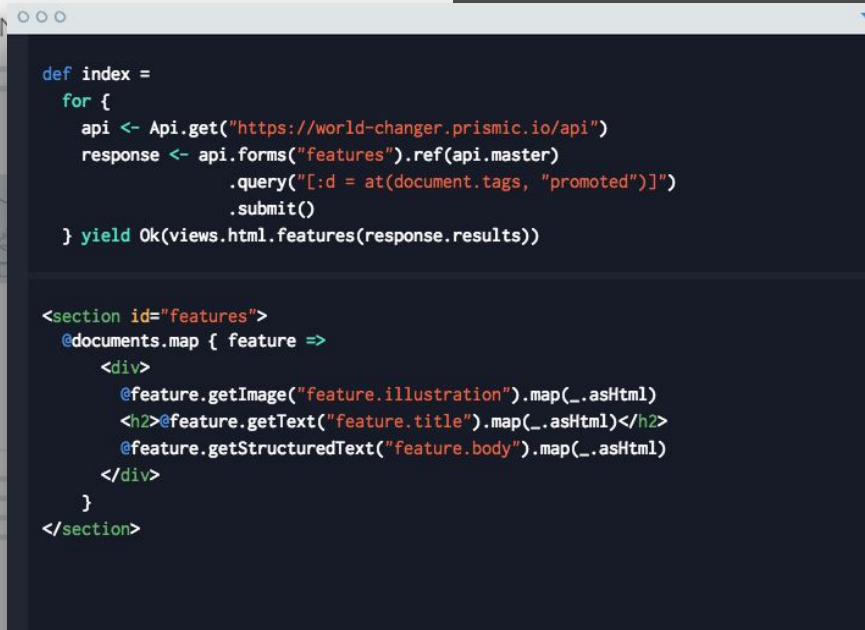
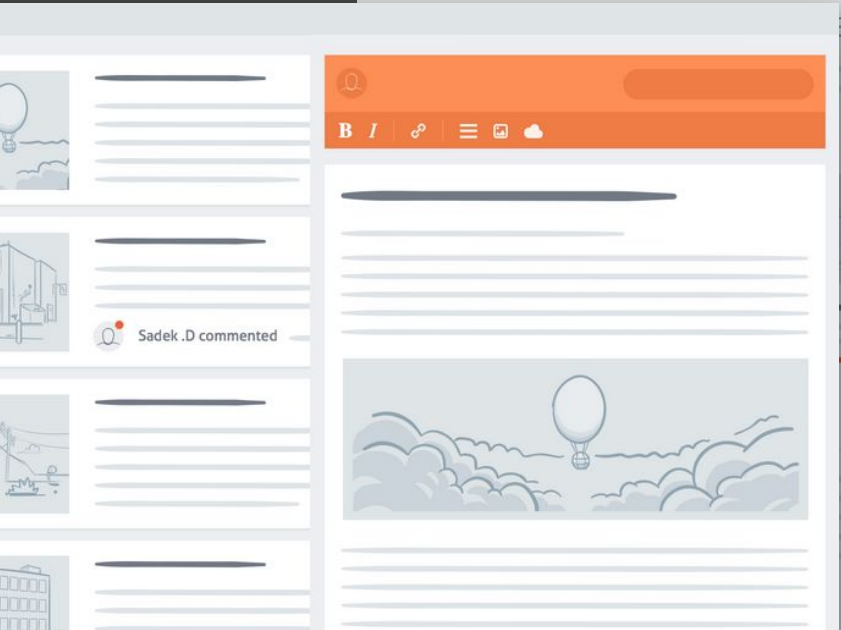
prismic.io is a new way to bring your website content alive



prismic.io is a new way to bring your website content alive

Content
management
backoffice

Simple Web API
to consume
content





Content is Central to Websites



Business Wise

- Offer Performance and Reliability
- Excel where every CMS fails

**First, we need to understand
the impact of system failure.**

Impact of System Failure

- Writing Room: No edit, save or publish
- API: No end-user website

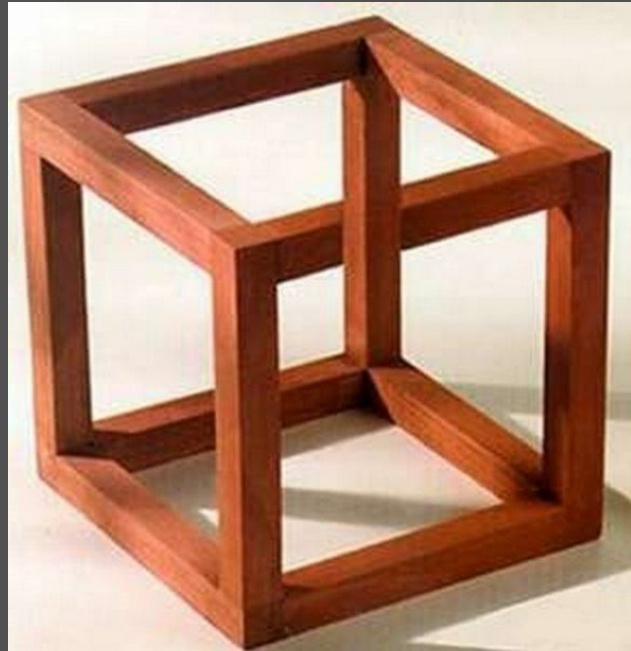
Impact of System Failure

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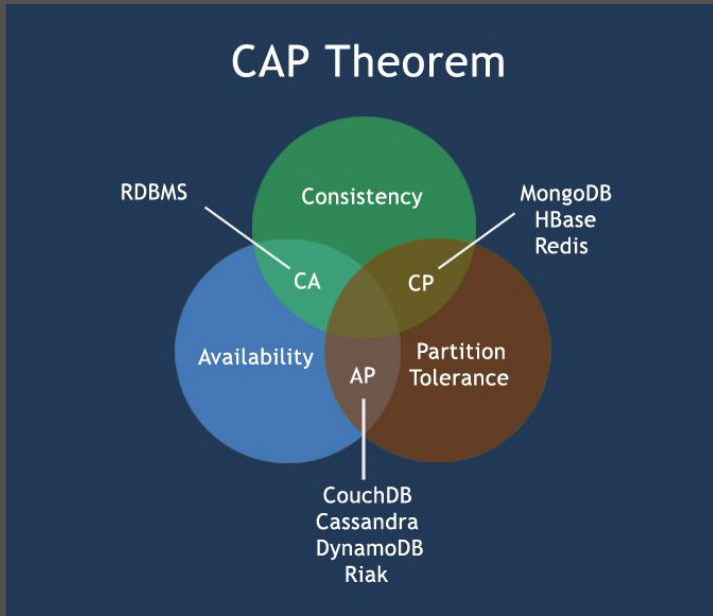
System Requirements From a Macro Perspective

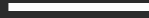
- Concurrent Write
- Concurrent Read
- Redundant
- Reliable and available
- Consistent

System Requirements From a Macro Perspective



CAP says no!





Let's Talk about Time



Observe time ticks



Observe time ticks

The image shows a screenshot of a Gmail interface. At the top, there's a navigation bar with "Mail" and several utility buttons. Below this, the left sidebar contains navigation options like "Compose", "Inbox", "Starred", "Important", "Sent Mail", "Drafts (1)", "Abzukulären", "Hohe Priorität", "Sonstiges", and "More". The main content area shows an email from "appengine.noreply" with the subject "Invitation to develop 'Remote...'. A modal window is overlaid on the email content, displaying a message from "Manuel Braun (w69b.com)" with the text "Hello Send Latr" and a large block of Lorem Ipsum placeholder text. The footer of the email shows "©2013 Google - Terms of Service" and "Manage" link.

Mail ▾

□ ▾ ↻ More ▾

1-1 of 1 < > ⚙ ▾

COMPOSE

Primary Social Promotions +

appengine.noreply Invitation to develop "Remote..."

Hello Send Latr

Manuel Braun (w69b.com)

Hello Send Latr

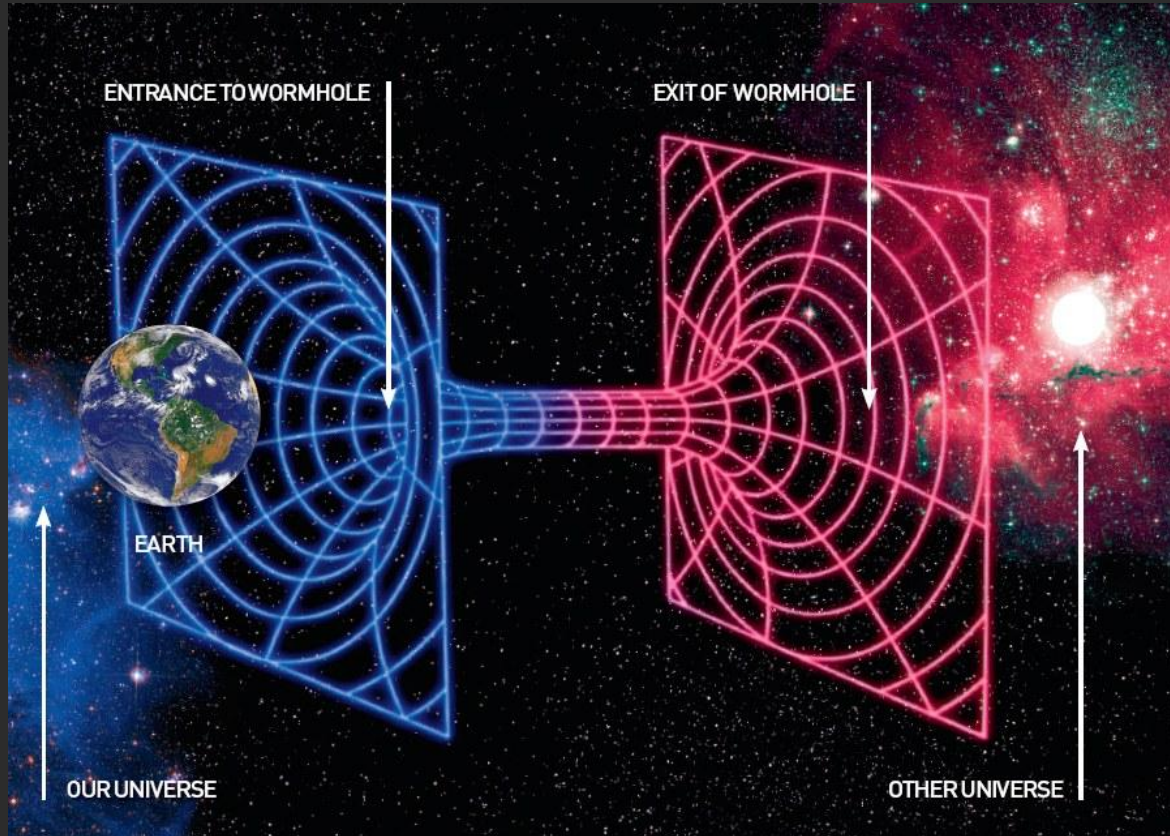
Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet.

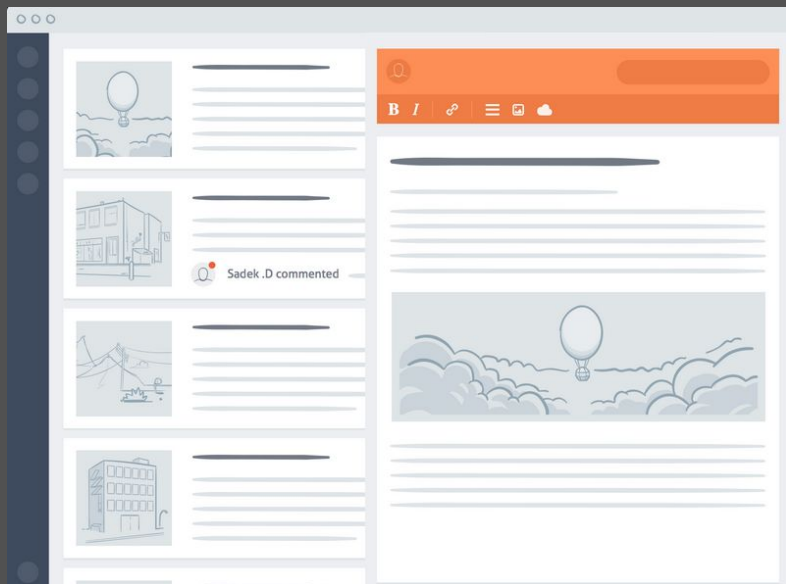
0 GB (0%) of 15 GB used
Manage

©2013 Google - Terms of Service

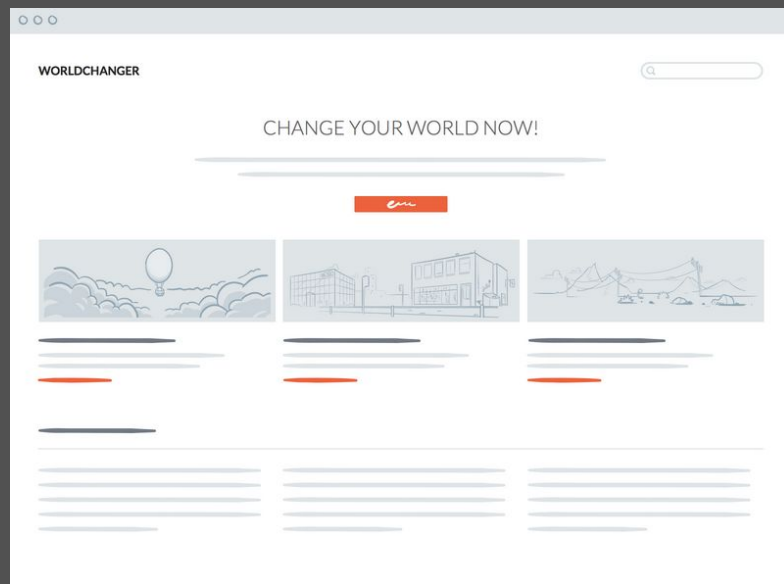
Search people...
Manuel Braun

Two different universes, two different times





Authors write
some content



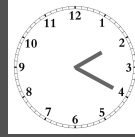
On Publish,
Content is displayed on
website



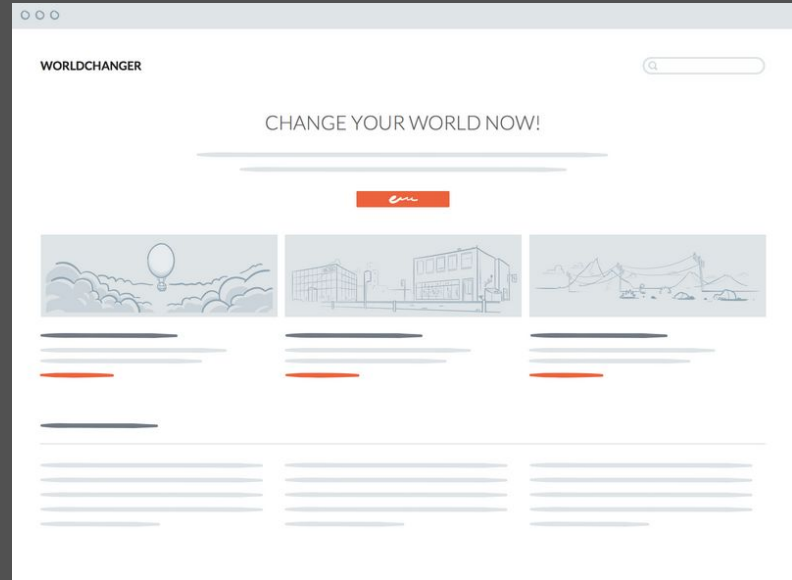
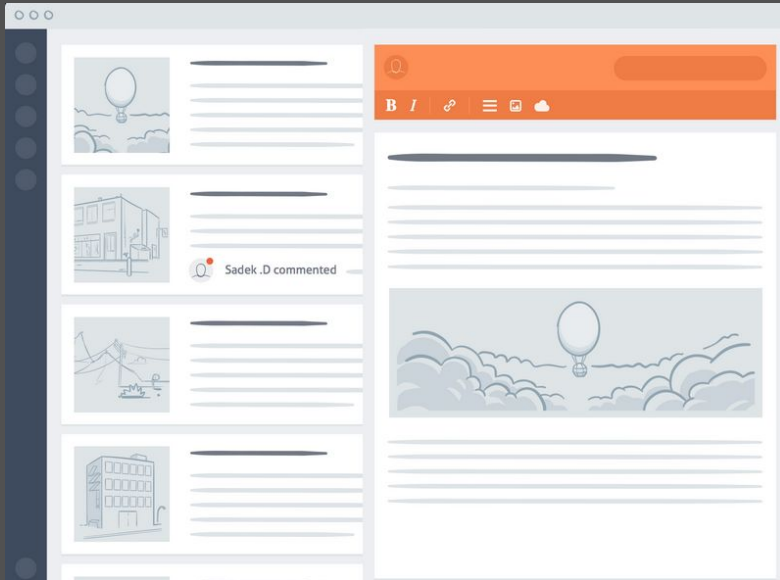
Two different universes, two different times



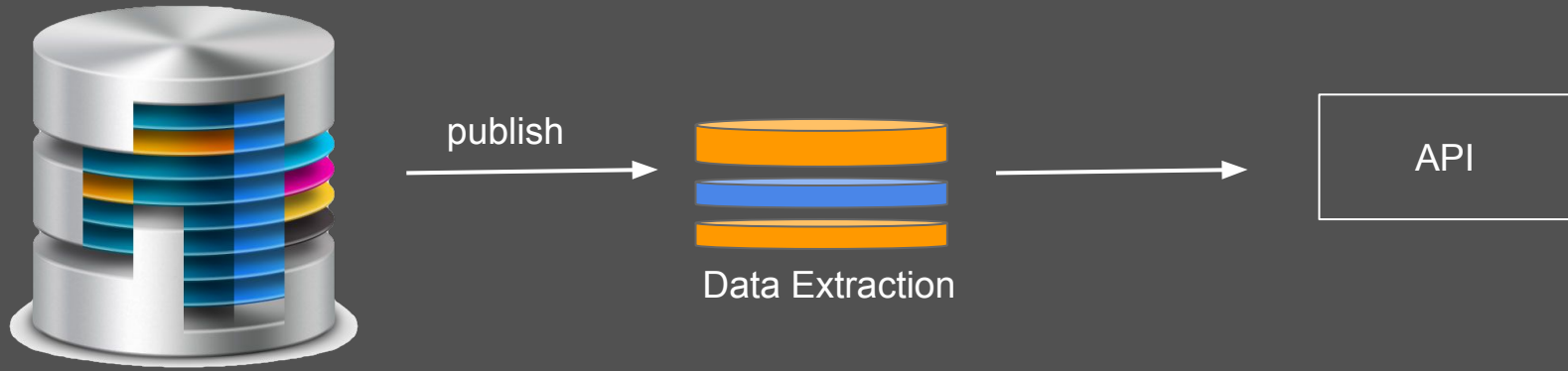
Writer universe



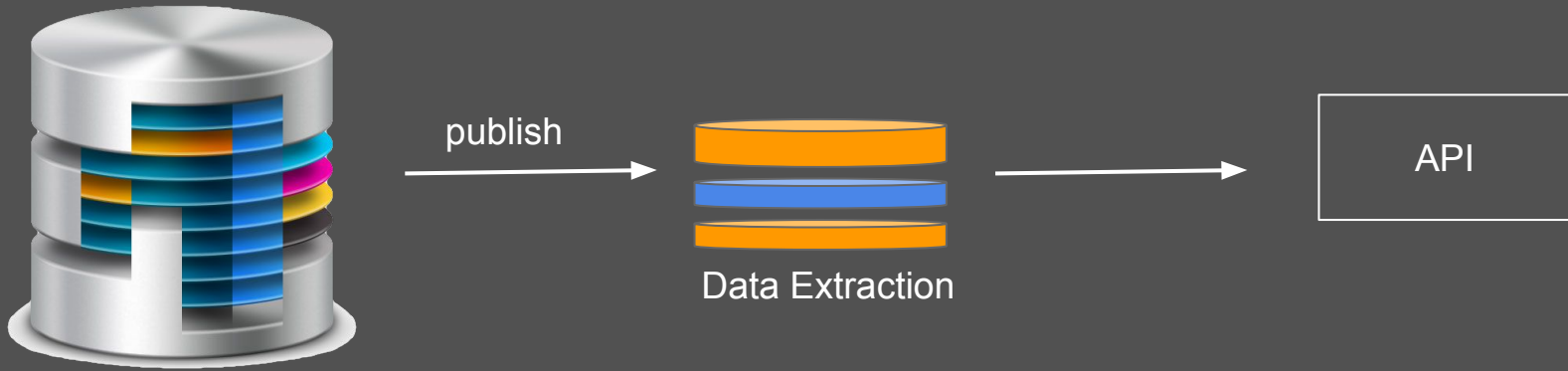
Viewer universe



On publish event, we update API system time



If Writing Room goes down, API isn't affected

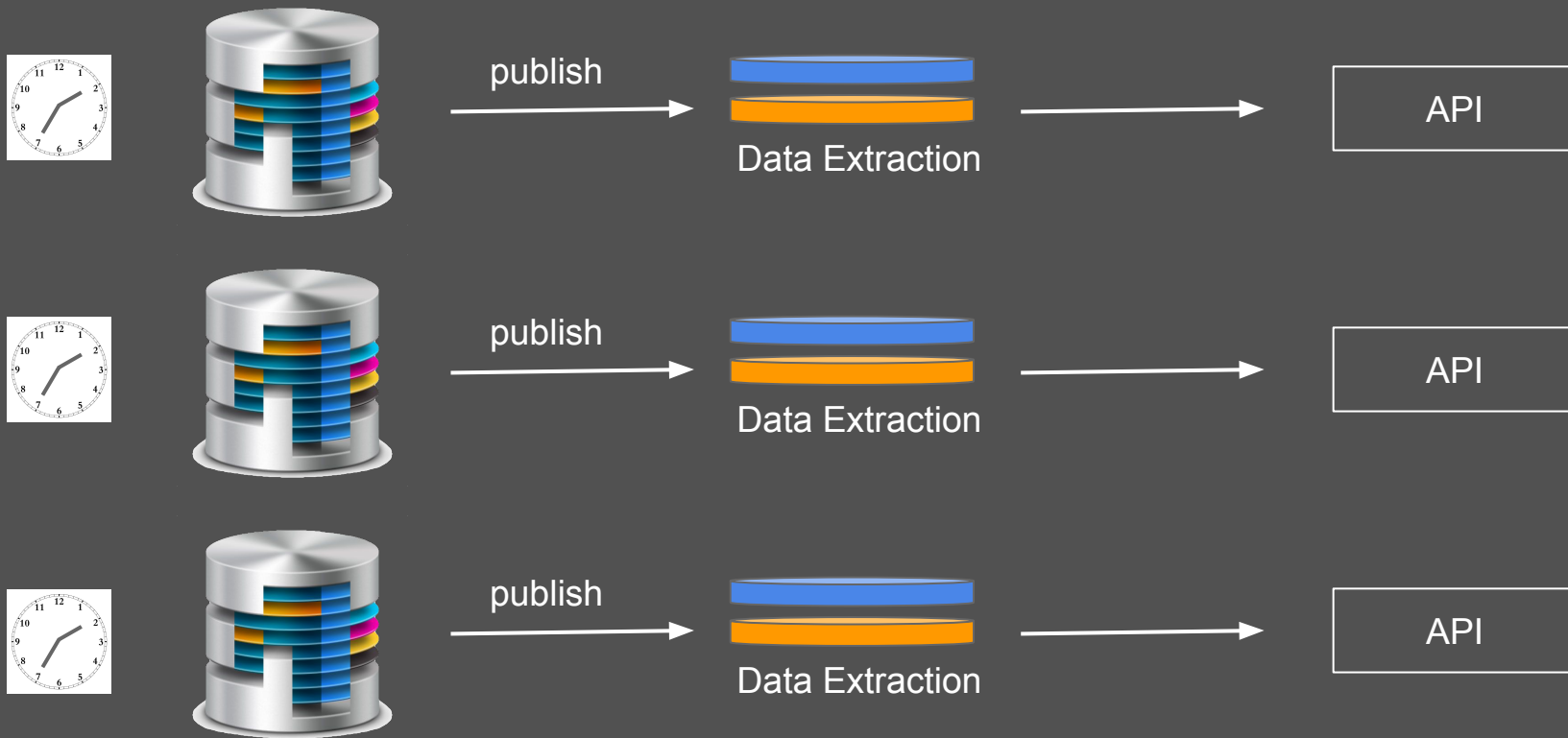




We Can Do Even Better



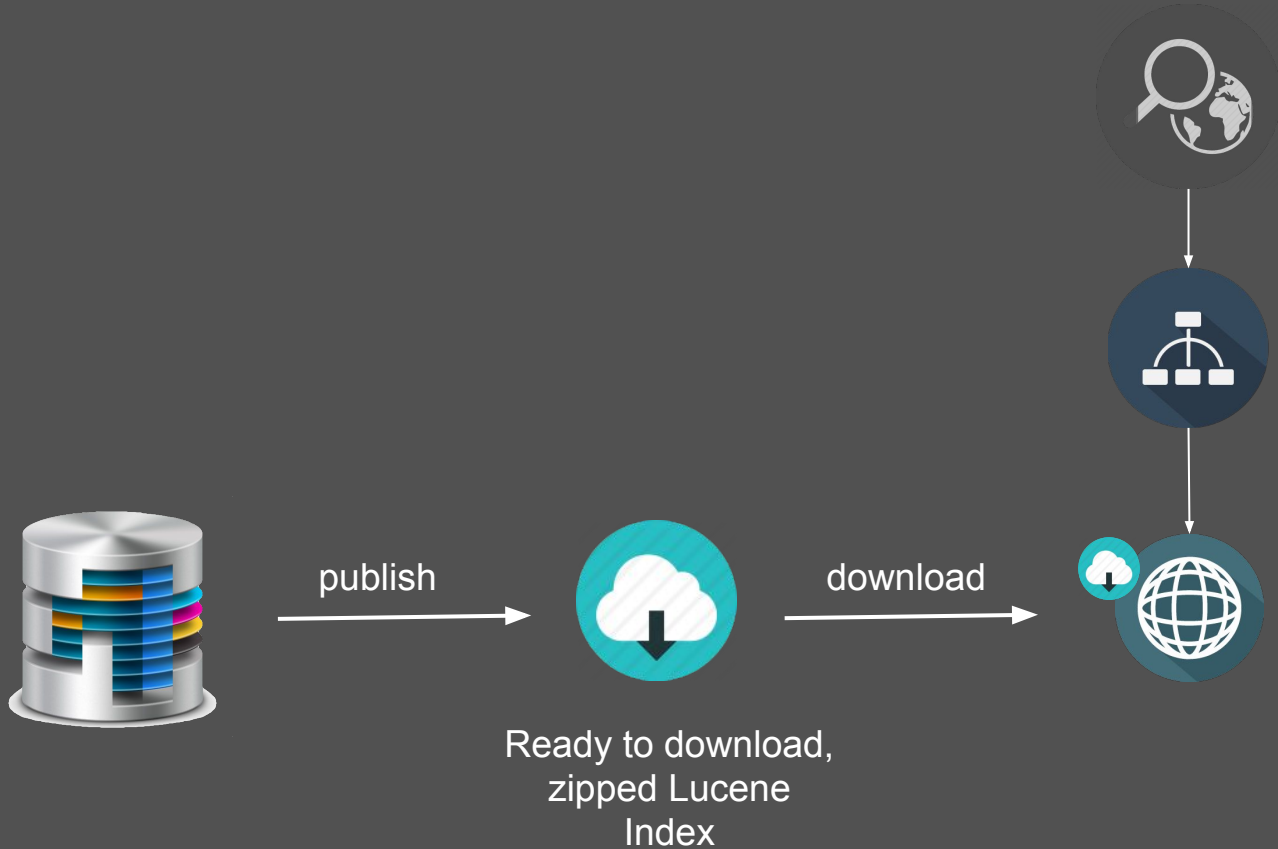
Clients APIs can be time decoupled too!



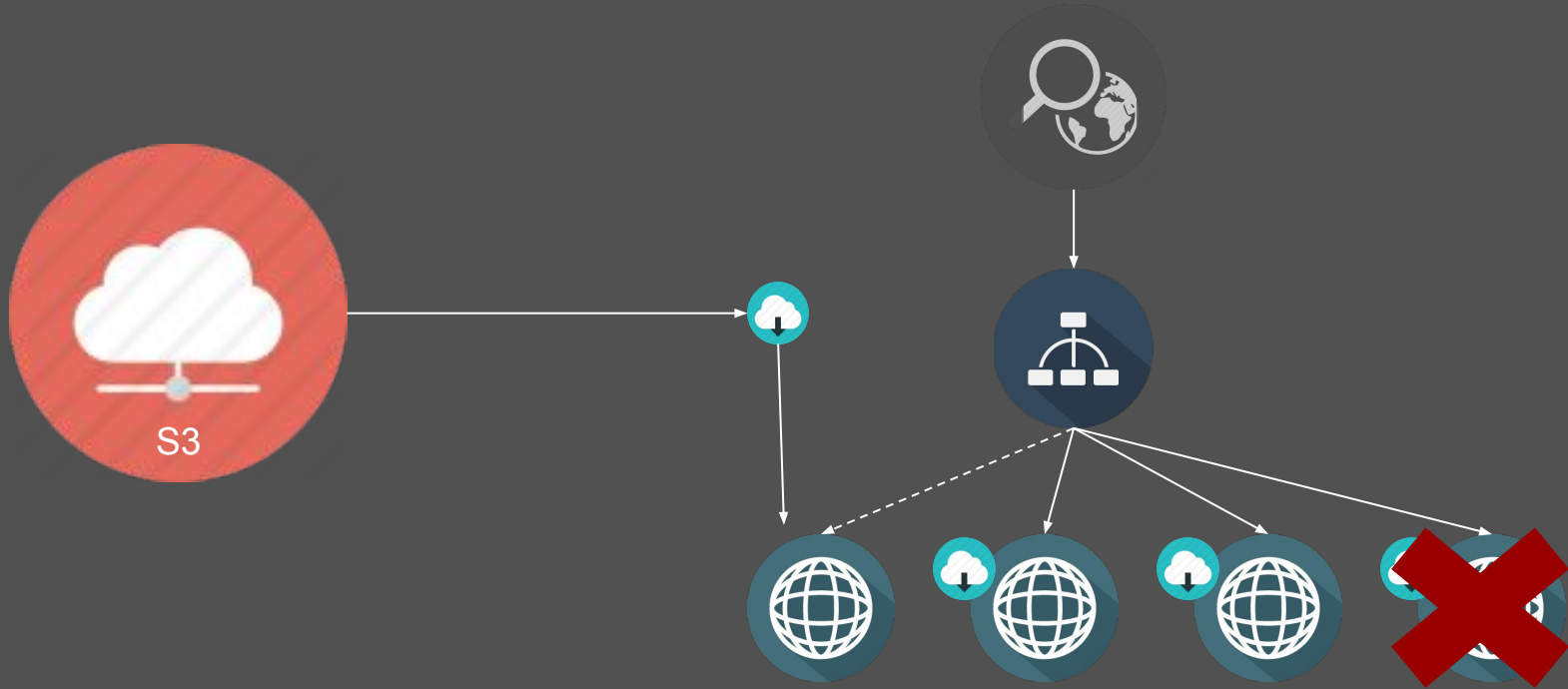
Infrastructure wise



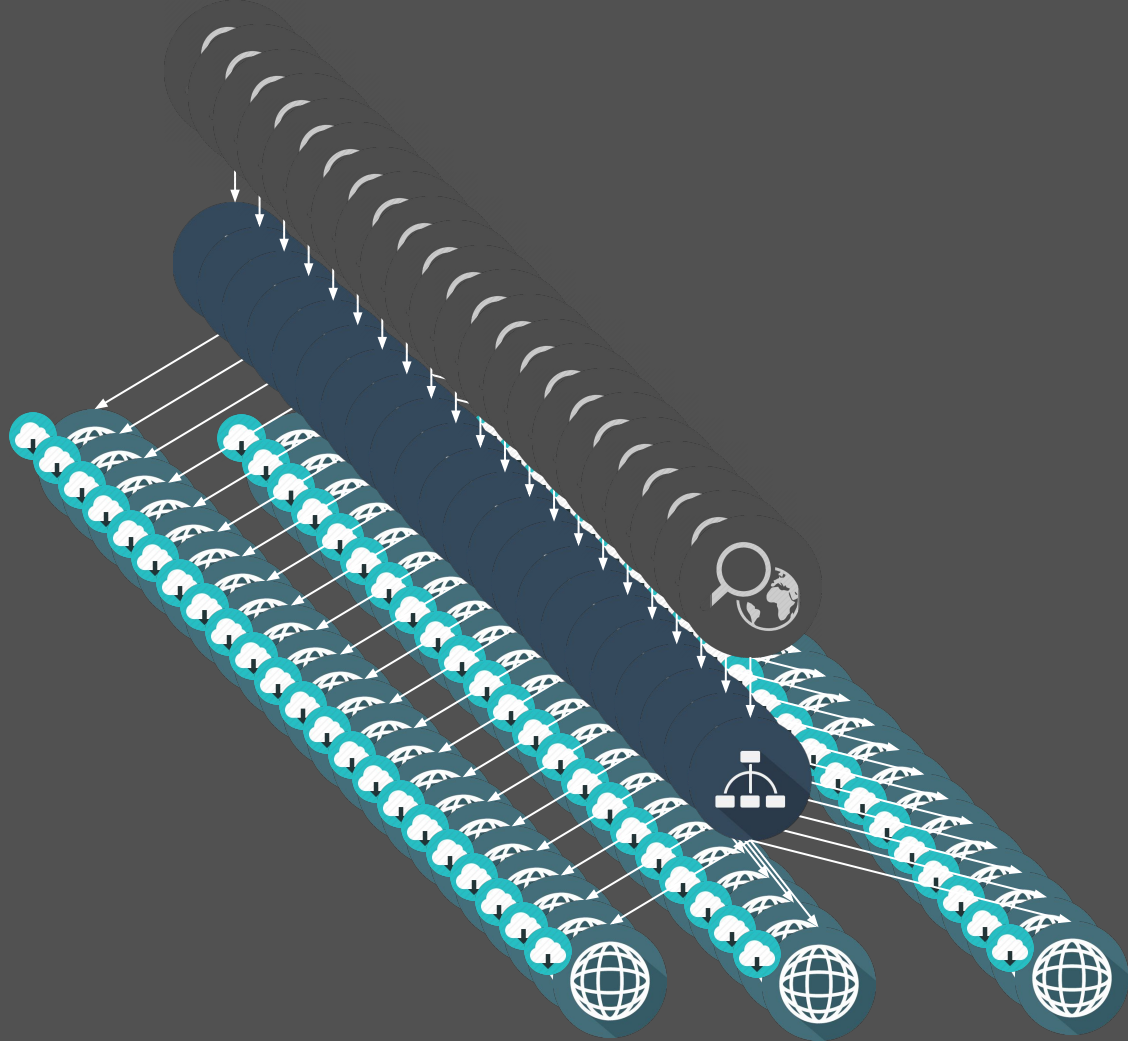
We use Apache Lucene for our API



Server Failure?



Elastic?



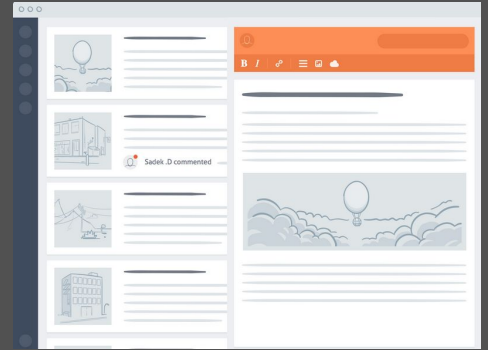
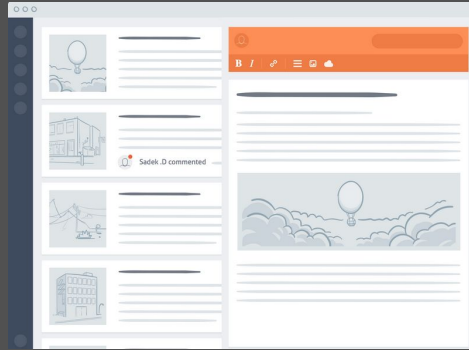
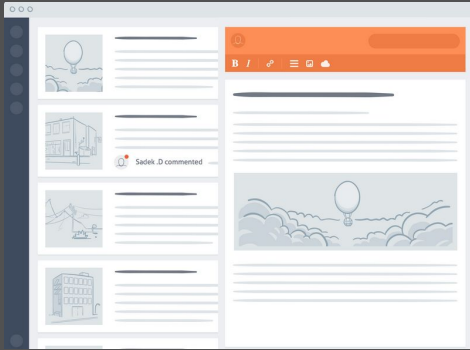
Do we need
traffic officers or
traffic lights
here?





Applying the Same on the Writing Room







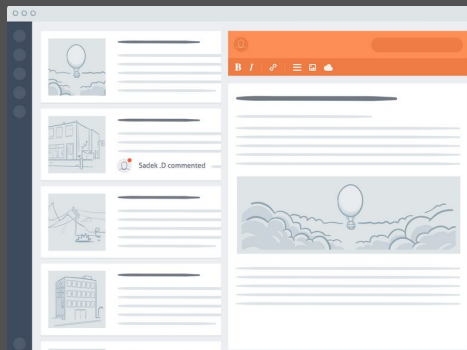
Two hours a day
to update news



Once a week
to post a blog post

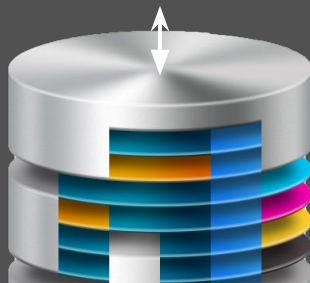


Did not connect
for weeks

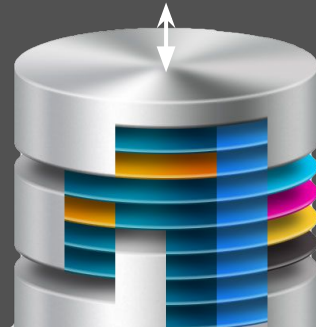
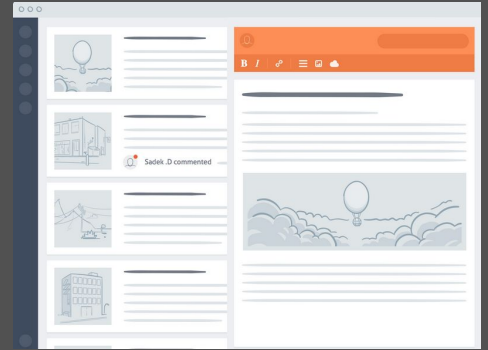
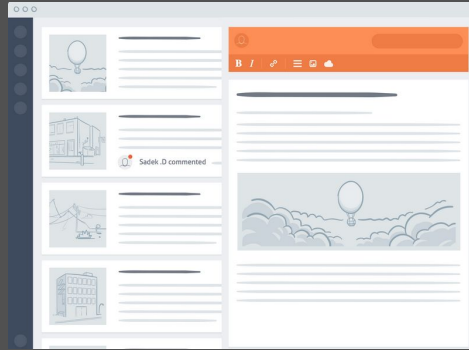
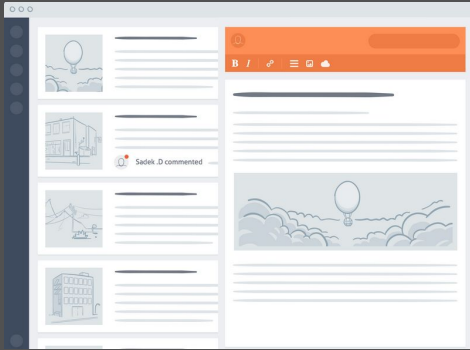


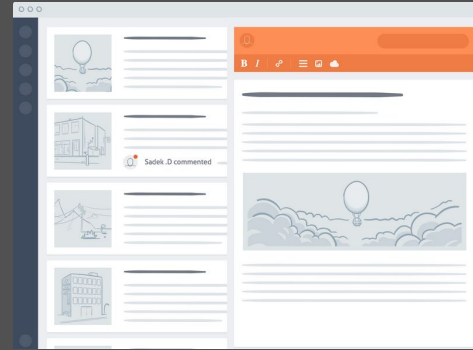
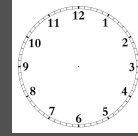
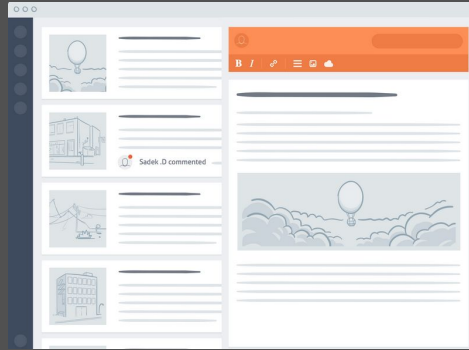
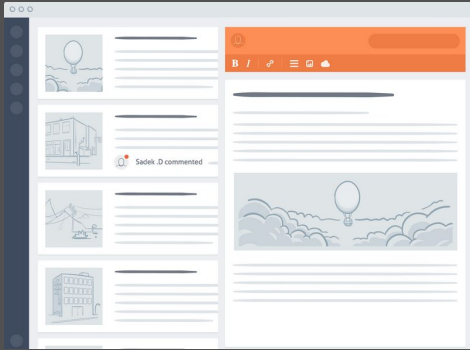
Interactive Read/Write

Giant database x100.000
repositories



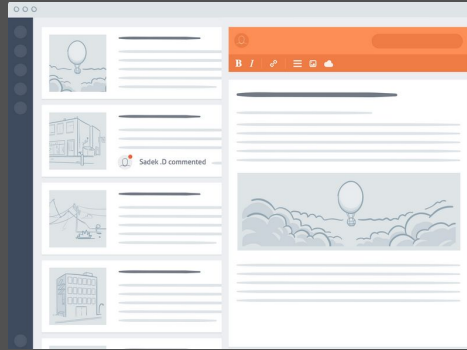
Does not connect
anymore



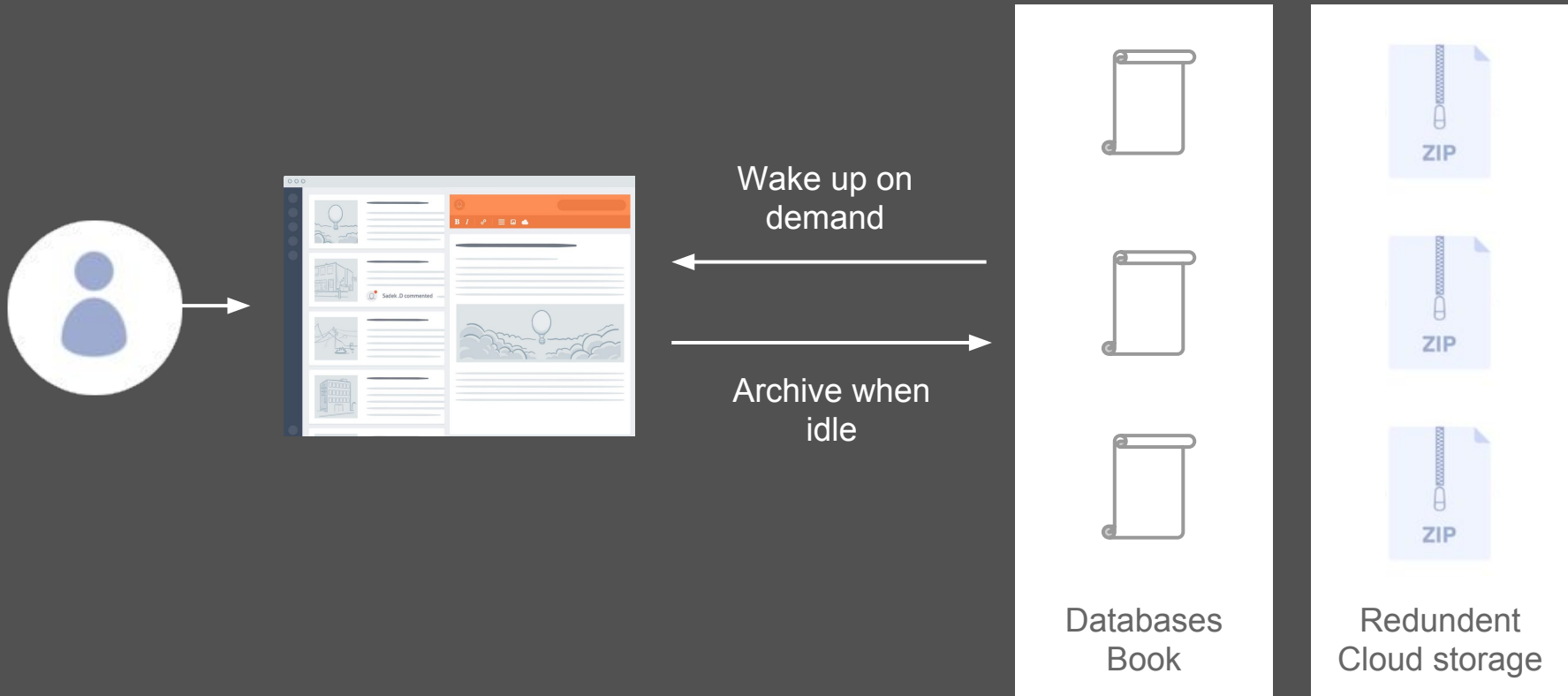


**Do we really need to keep everything
here in case of?**





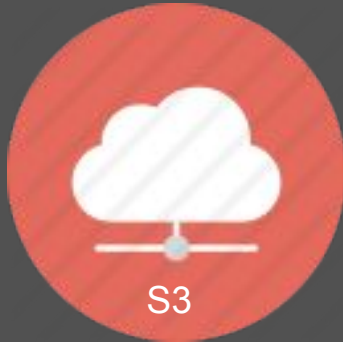
Each repository has its own lifecycle



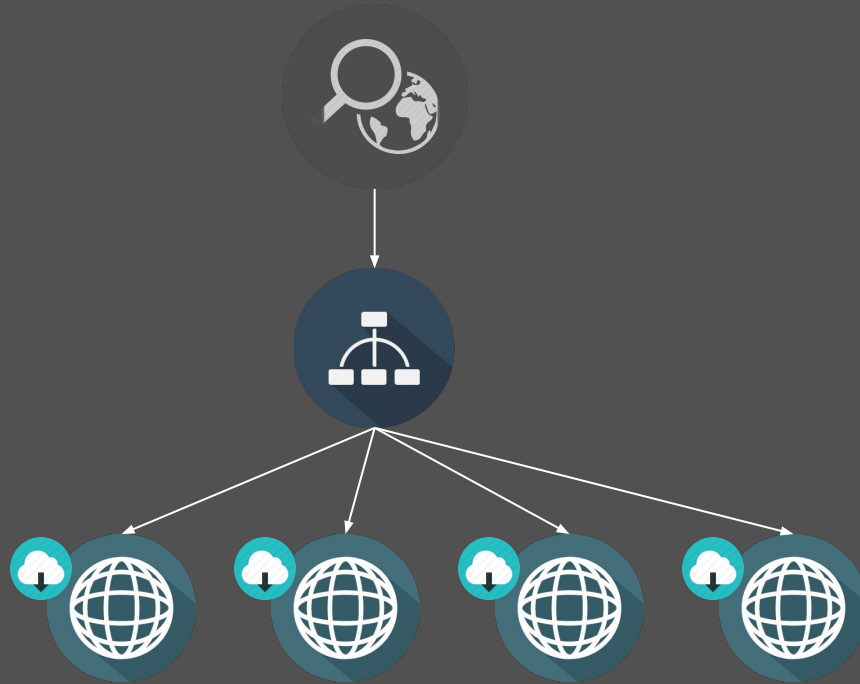
Infrastructure wise



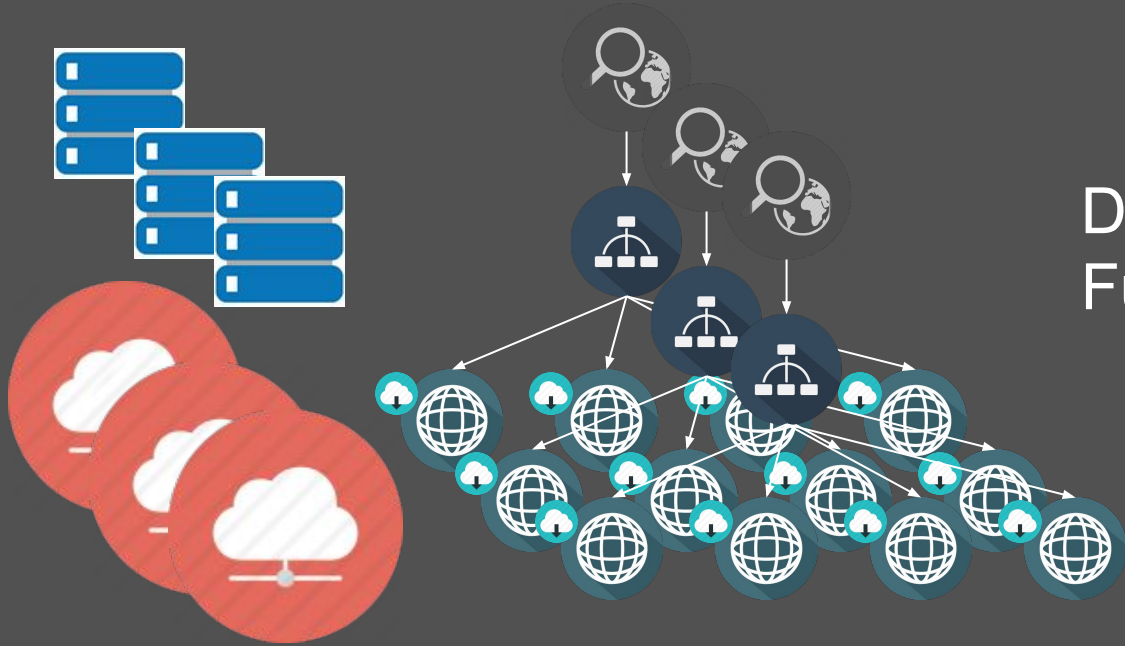
logs



snapshots



Clusters



Data Migration
Functionality A/B Testing

Observe time ticks



Solves

- Scalable space-efficient infrastructure
- Data migration and versioning (avoid stop-the-world migrations)
- Multiple production environments (with multiple data versions)
- Testing new functionalities

System Requirements From a Macro Perspective

- Concurrent Write
- Concurrent Read
- Redundant
- Reliable and available
- Consistent



Scalability is not a buzzword you can put on a slide
nor
A technology you can purchase



