Monitoring All the Things
Keeping Track of a Mixed Estate
Luke Blaney, Financial Times

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Monitoring a microservice is…

Tricky

Monitoring all your team's microservices is…

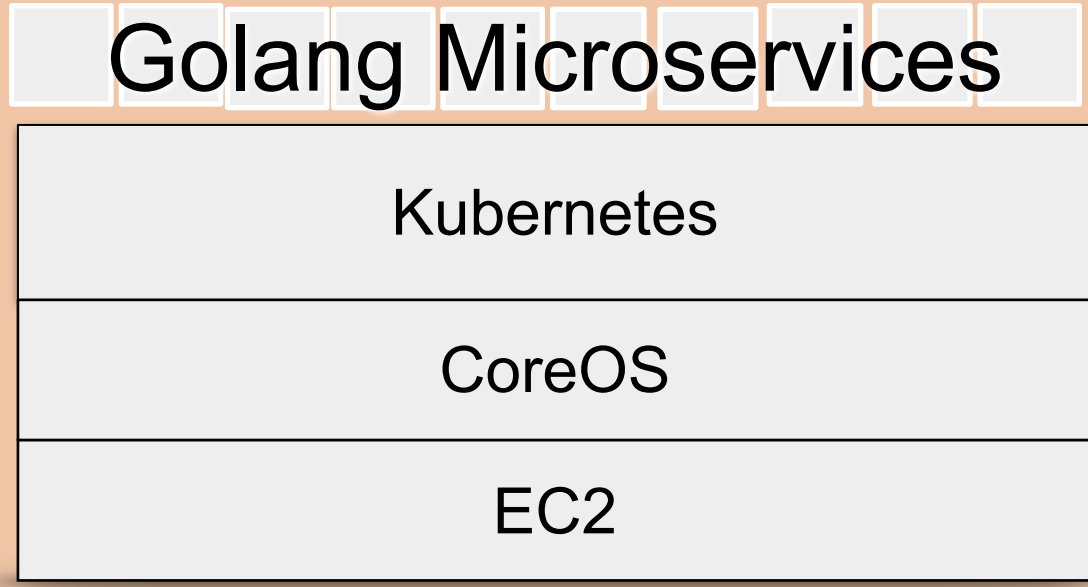
Difficult

Monitoring every service in your organisation is…

???

The FT's Tech Stack

The FT's Tech Stack



The FT's Tech Stack

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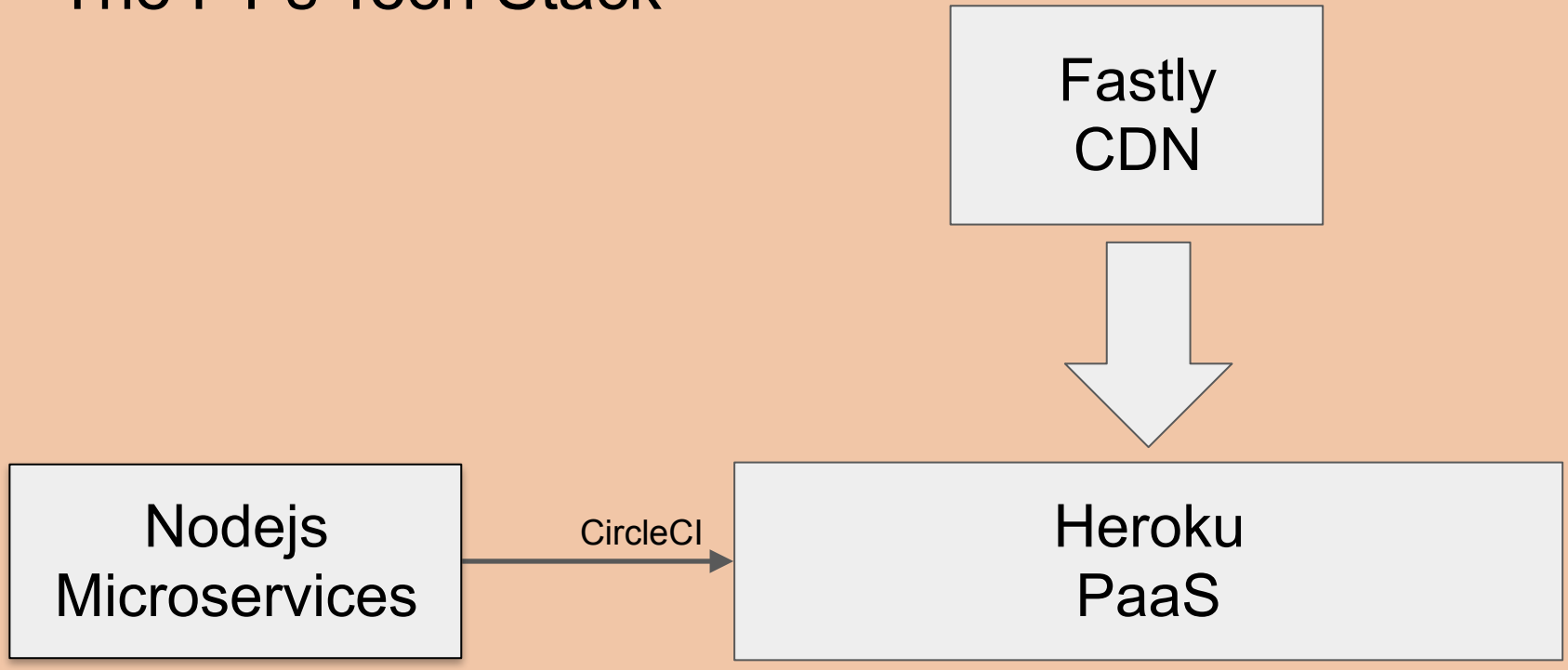

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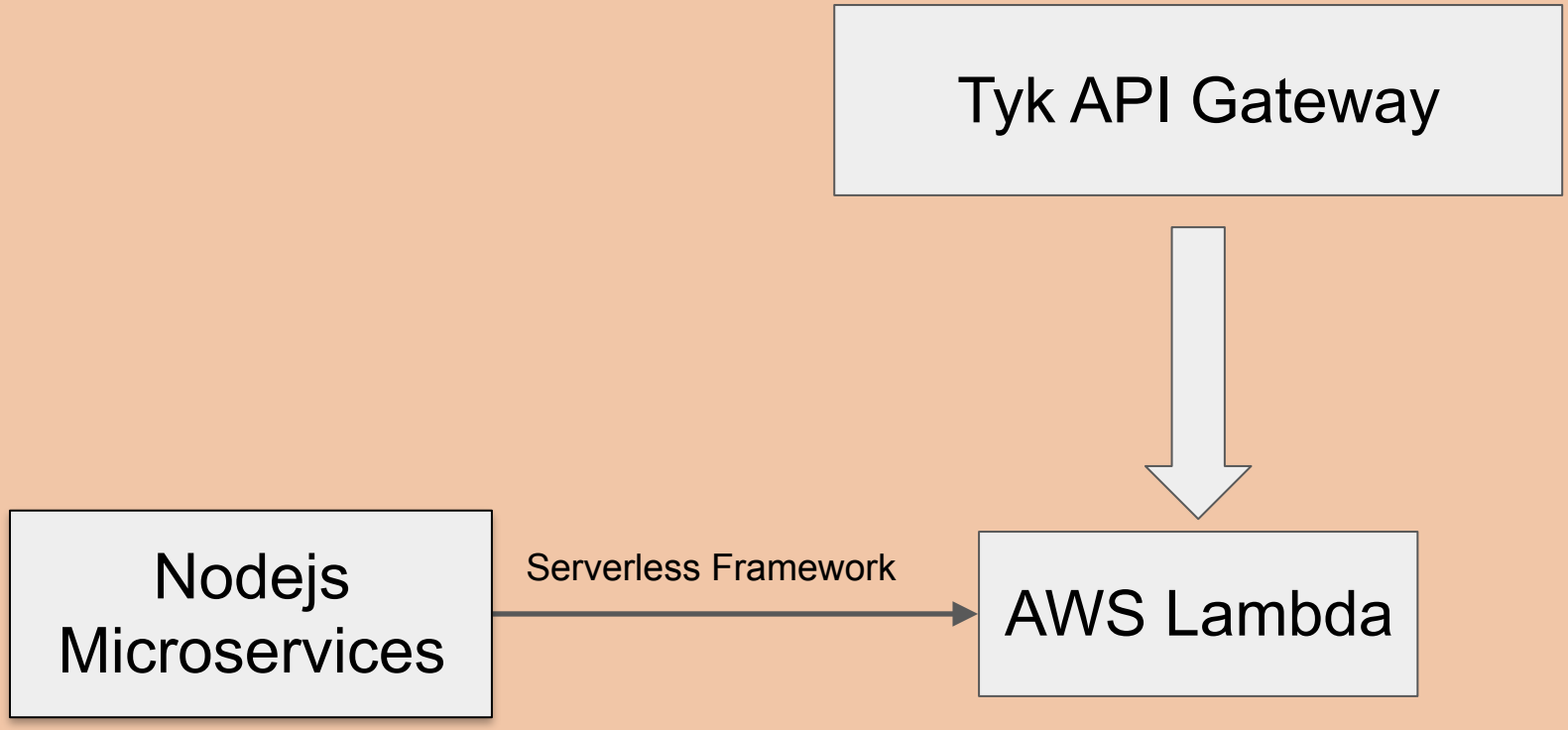
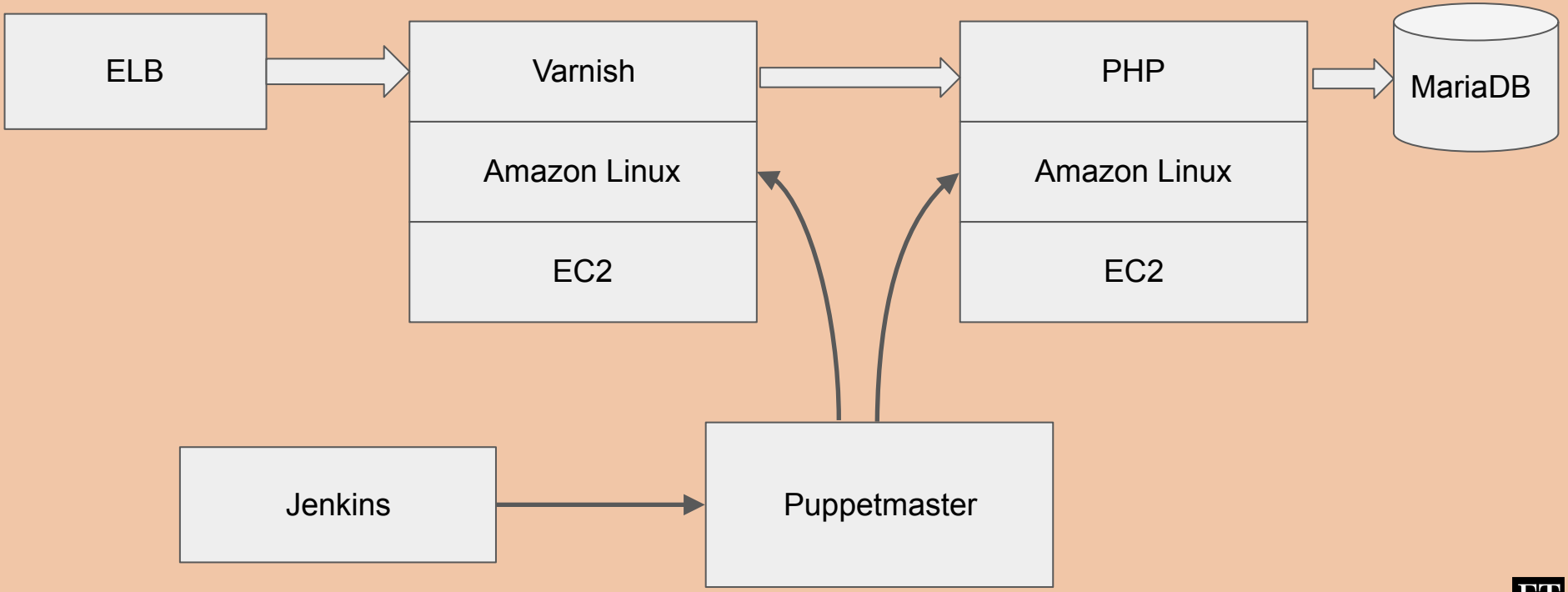


The FT's Tech Stack

The FT's Tech Stack



The FT's Tech Stack

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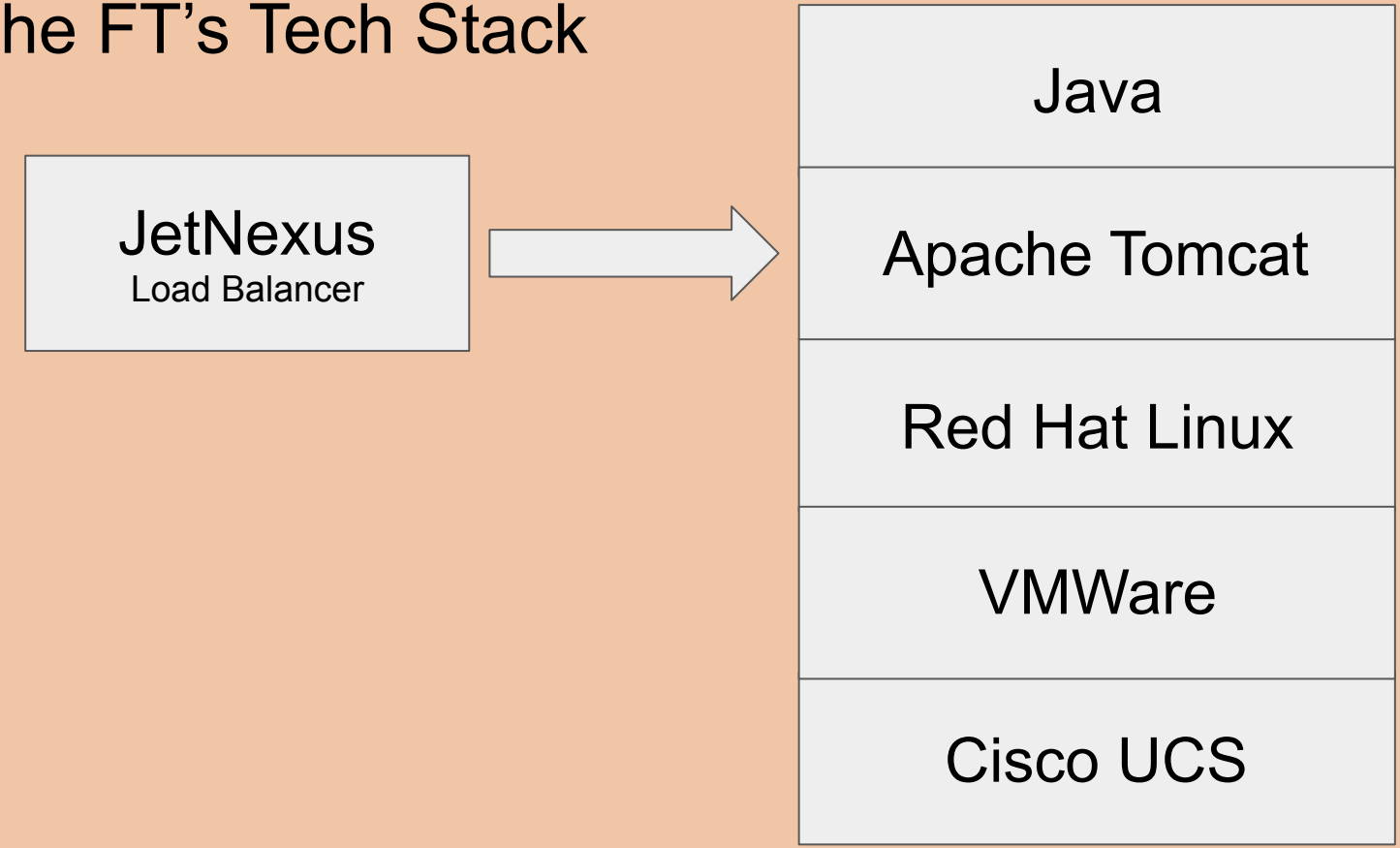
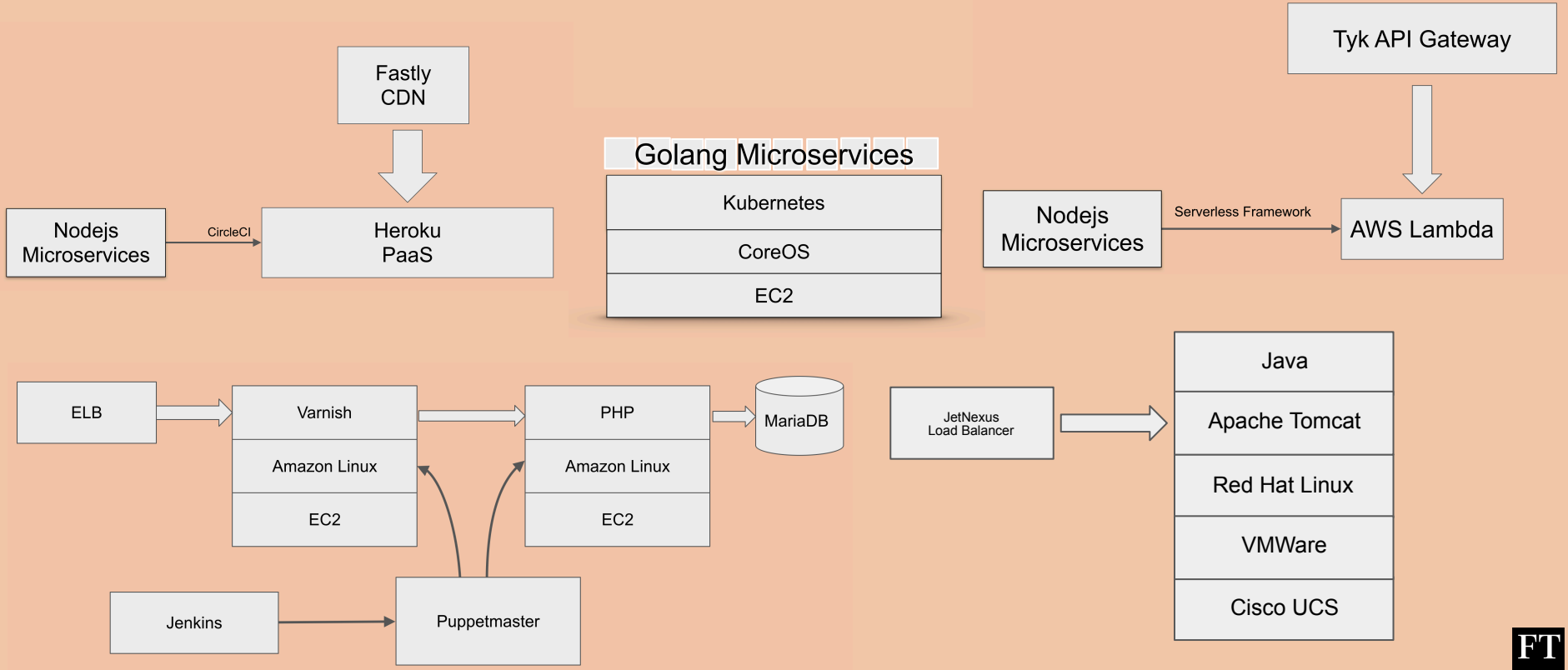
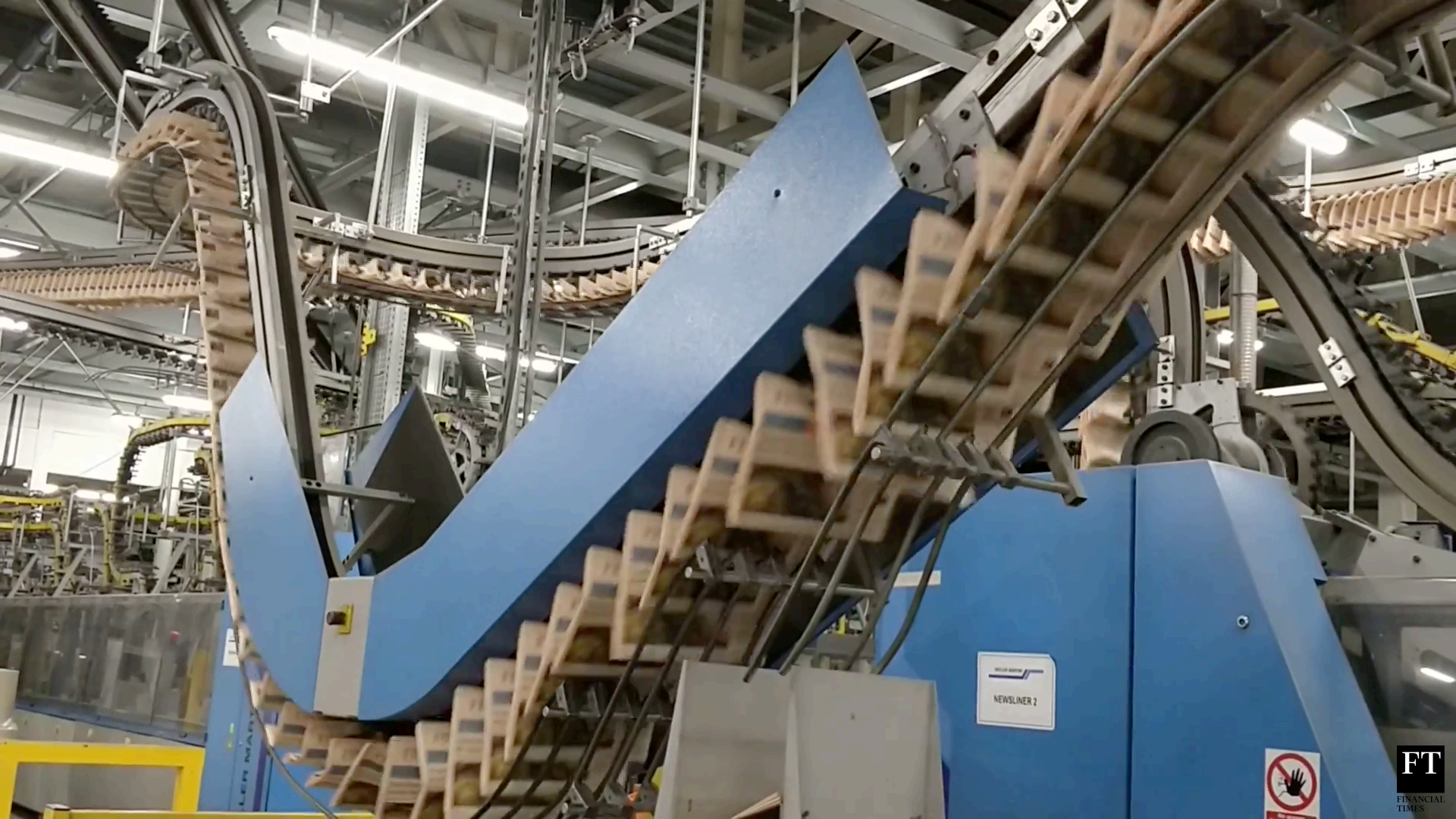


Yeah, but which of these does the FT do?



Yeah, but which of these does the FT do?

All of Them


NEWSLINER 2

@lucas42

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130 years of quality journalism

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130 years of legacy

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62005

@lucas42

Zabbix

Nagios

Pingdom

Cloudwatch Alarms

Orion

Custom Health Endpoints

Grafana

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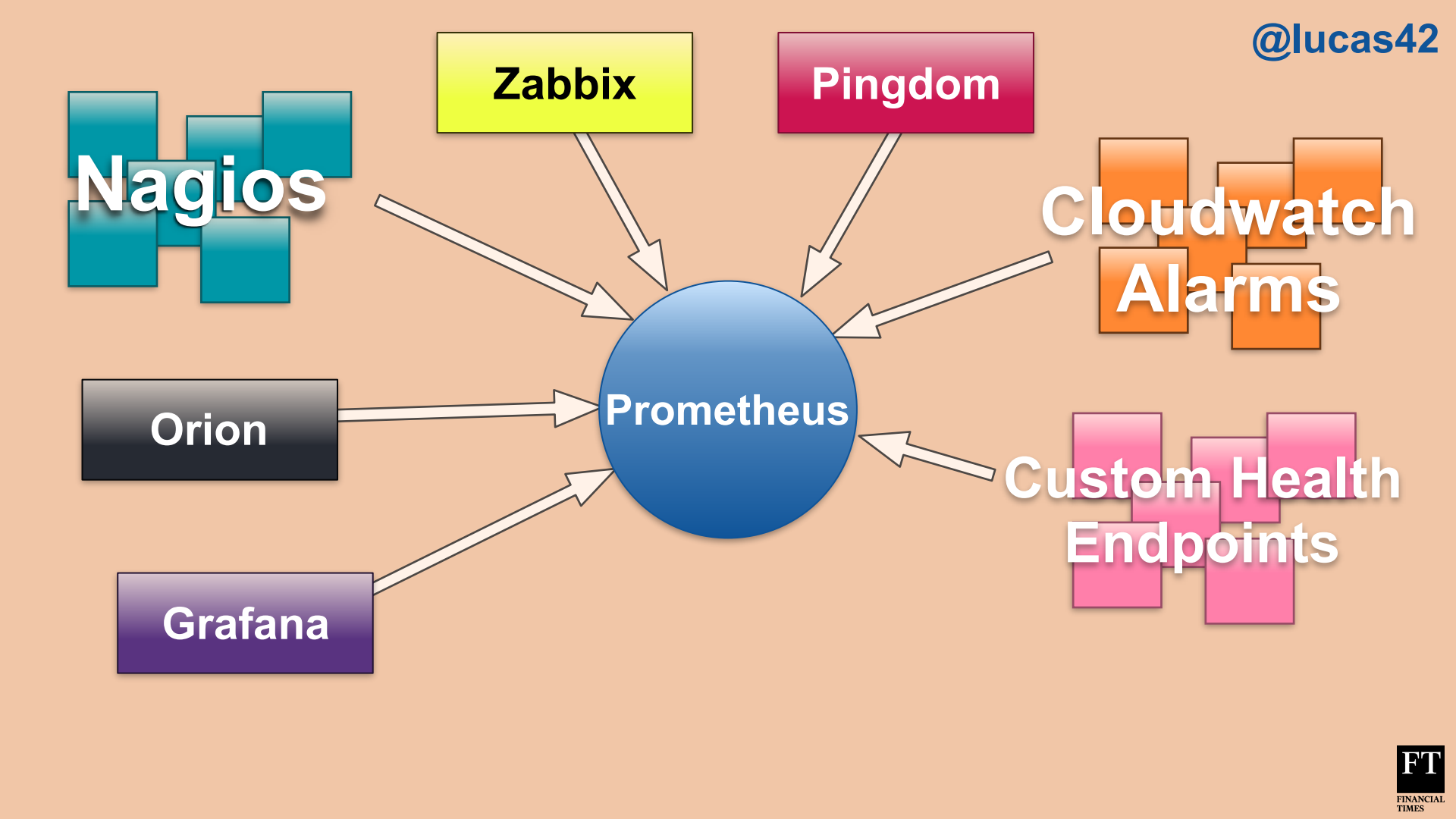
@lucas42
Zabbix
Pingdom
Nagios
Cloudwatch Alarms
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Orion
Custom Health Endpoints
Grafana
FT
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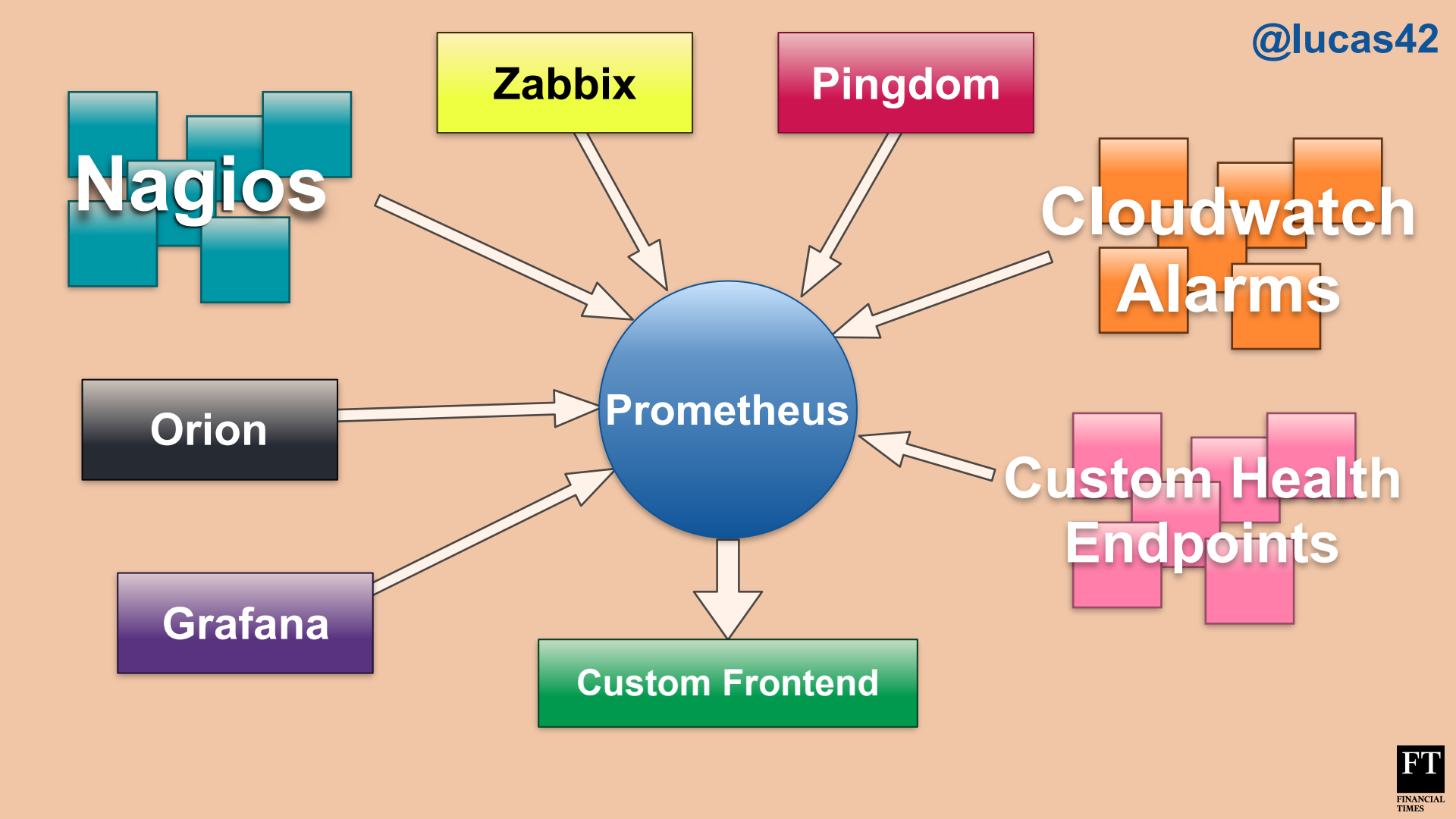
@lucas42
Zabbix
Pingdom
Nagios
Cloudwatch Alarms
Prometheus
Orion
Custom Health Endpoints
Grafana
Custom Frontend
FT
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Heimdall Monitoring hub

FAQs Add Monitoring Report a bug

16 fail **537 pass**

Session API **4 / 211** failing (Severity 3) 1 paused Platinum	Kafka **4 / 48** failing (Severity 3) Gold	Subscription API **1 / 25** failing (Severity 2) Gold	User Id Service **1 / 8** failing (Severity 1) Gold	Alphaville **1 / 12** failing (Severity 3) Bronze	Ammit **1 / 30** failing (Severity 3) Bronze	Comments API **1 / 1** failing Released: 16 minutes ago Bronze	Confluence **1 / 19** failing (Severity 1) Bronze	Enterprise Tools **2 / 28** failing (Severity 2) Bronze	FT.com myFT Page **1 / 15** failing (Severity 3) Bronze	k-health **4 / 4** failing (Severity 1) Bronze	Session user data service **1 / 6** failing (Severity 3) Bronze	Single Sign On De-provisioning **1 / 28** failing (Severity 2) Bronze	Syndication Api **1 / 8** failing (Severity 3) Bronze	Vault **1 / 9** failing (Severity 2) Bronze	unknown-monitored-by-zabbix **1 / 33** failing Unsupported	Access Platinum	Acquisition Context Service Platinum	Active Directory Platinum	AIM TOTP Se Platinum
API Gateway Endpoints - Platinum Platinum	API Gateway Grouping (Parent) Platinum	APIG Fastly router Platinum	APIG Inspectah Deck Platinum	B2B Fulfilment Service Platinum	Biz Ops Runbooks Platinum	Cassandra Platinum	Cisco UCS Platinum	Claro Platinum	Commerce (Parent) Platinum	Fotoware Platinum	FT App Flags (PHP) Platinum	FT WebApp Platinum	FT.com Platinum	FT.com Article Page Platinum	FT.com Elasticsearch Interface Platinum	FT.com Error Pages Platinum	FT.com Fastly Service Platinum	FT.com Flags API (Read) Platinum	FT.com Front Platinum
FT.com Page Purger Platinum	FT.com Preflight Platinum	FT.com Router Platinum	FT.com Service Registry Platinum	FT.com Session API Platinum	FT.com Stream Page Platinum	Google Analytics - non FT.com Platinum	GoogleDFP Decommissioned Platinum	Graphite V2 Platinum	Heimdall UI Platinum	Investors Chronicle CDN Platinum	Methode Proofing Platinum	Methode Publishing system and CMS Platinum	Methode Swing Platinum	Methode Wires Platinum	Monitoring Aggregation ECS Platinum	Monitoring Aggregation Prometheus Platinum	NAR Fastly Service Platinum	NAR Nikkei Asian Review Website and CMS Platinum	NetApp Stora Platinum
Newsprinters Knowsley Platinum	next-api FT.com GraphQL Platinum	Ontotext Managed Service (Inc. Recommended Reads, Concept Extraction, Location Extraction, Most Read) Platinum	Origami Bower Registry Platinum	Origami Image Service V2 Platinum	Origami Navigation Service Platinum	Origami Navigation Service Data Platinum	PAC Aurora DB Platinum	PAC Prod EU Platinum	PAC Prod US Platinum	Platform for Annotation Curation Platinum	Print Site Distribution: Arktex Platinum	Printsite Chicago Platinum	Printsite Dubai Platinum	Printsite Frankfurt Platinum	Printsite Hong Kong Platinum	Printsite Korea Platinum	Printsite Madrid Platinum	Printsite Milan Platinum	Printsite New Platinum
Printsite Tokyo Platinum	Prometheus Alertmanager Platinum	Prometheus Biz Ops Info Exporter Platinum	Prometheus CloudWatch Alarms Exporter Platinum	Prometheus Grafana Exporter Platinum	Prometheus Healthcheck Exporter Platinum	Prometheus Nagios Exporter Platinum	Prometheus Orion Exporter Platinum	Prometheus Pingdom Exporter Platinum	Prometheus Zabbix Exporter Platinum	Salesforce Platinum	Secure Login API Platinum	SecurEnvoy Platinum	Spark Platinum	Spark API Platinum	Spoor API Platinum	St Clement Press (BOW) FT printsite Platinum	TagMe Platinum	Universal Publishing Platform APIs Released: 49 minutes ago Platinum	UPP Notifica Push Monitor Platinum
UPP Prod Publish EU Platinum	UPP Prod Publish US Platinum	User Credentials Service Platinum	User Product Service Platinum	User Profile Service 1 paused Platinum	VMware Platinum	Web App API Platinum	Zuora Platinum	Zuora Proxy Client Platinum	Access Licence Service Gold	Acronis Files Connect(AFC) File Servers & Network Storage Gold	AMP Access Service Gold	API Authorization Service Gold	API Gateway Endpoints - Gold Gold	Archimedes SOAP Interface Gold	Barrier App Gold	Citrix (New Farm; Methode, Financial Apps, Palms, Archimedes) Gold	Customer-SSO Gold	Email Platform authoring & templates: campaigns API Gold	Email Platfor authoring & templates: SparkPost Interceptor Gold
Email Platform Editorial: EME API Gold	Email Platform Editorial: EME scheduler Gold	Email Platform Editorial: EME UI Gold	exec-appointment Decommissioned Gold	fastft 1 paused Decommissioned Gold	FDI Benchmark Gold	FDI Intelligence Gold	FT Adviser 17 paused Gold	FT Live Gold	Github Key Detector Leak Process Gold	Grafana Gold	How To Spend It Gold	Intellitune Gold	Investors Chronicle Gold	Licence Data Service Gold	m-login service Gold	MarkIt Pink FT Gold	Membership GraphQL API Gold	MMA Gold	Network - AV Direct Conne (DX) Gold
Offer API Gold	Okta Gold	Origami Build Service Gold	Palmsprint Gold	Remote Access (Juniper Client) Decommissioned Gold	S3O (Staff Single Sign On) Gold	SMTP - Mail Gateway Service Gold	Soap Archimedes Interface Gold	Social Login Service Gold	Splunk Gold	Splunk Edge Forwarder Gold	Top 500 Islamic Banks Decommissioned Gold	User Masquerade service Gold	virtual-private-network-vpn Gold	WavTeq (BankerDB) Gold	Web App Admin Tool Gold	wraptcha Gold	Zookeeper Gold	AD Login for AWS Console Access Silver	Analyse Afric 3 paused Decommissione Silver
AWS Console Access via OKTA Silver	Bertha Silver	Board Directors Programme Silver	Digital Editions/PDF's: Various Customers Silver	ft-funds Silver	ftchinese 1 paused Silver	FTPlatform Silver	FTPlatform2 Silver	GitHub Silver	Global Risk Regulator Silver	icnewsstandapp Silver	IG Content Silver	Jira Cloud Silver	Microsoft Office 365 Tenant Silver	Newspaper Distributors Silver	Okta Config & Infrastructure - Internal (AWS) Silver	Origami Repo Data Silver	PALMS - Websites (Retailer/Wholesaler http://fhdistribution.)	Pensions Expert Silver	Polyfill servic 1 paused Silver
Salesforce Offers Bridge Silver	The Banker Silver	The125 Decommissioned Silver	This is Africa 1 paused Decommissioned Silver	Virtual Center DB Silver	Web App - app-access micro service Silver	Operations Retailer Bronze	Adobe Portal Bronze	Ads Billing API Bronze	ads-api Bronze	Alert Logic - AWS Threat Managers Bronze	Alert Logic - Office Threat Managers Bronze	ammit-docs Bronze	API Gateway Endpoints - Bronze Bronze	APIG Reporting Tool Bronze	app-push-notifications Bronze	Apple DEP Integration with Jamf Pro Bronze	apple-merchant-validation-svc Bronze	Appsense Bronze	Asana Bot Bronze
AWS Account B2B Products Prod Bronze	AWS Account Backup and Archive Prod Bronze	AWS Account Compliance Prod Bronze	AWS Account Composer Prod Bronze	AWS Account Content Platform Prod Bronze	AWS Account Cyber Security Prod Bronze	AWS Account Data Prod Bronze	AWS Account Desktop As A Service Prod Bronze	AWS Account Dev X Prod Bronze	AWS Account Digital Print Services Prod Bronze	AWS Account Editorial Appstream Prod Bronze	AWS Account Editorial Prod Bronze	AWS Account Enterprise Products Prod Bronze	AWS Account Envoy Prod Bronze	AWS Account Ez Publish Prod Bronze	AWS Account FT Live CRM Prod Bronze	AWS Account FTPlatform2 Prod Bronze	AWS Account Global Service Desk Prod Bronze	AWS Account IG Prod Bronze	AWS Account Prod Released: 20 minu ago Bronze
AWS Account IP Finance Appstream Prod Bronze	AWS Account Labs Prod Bronze	AWS Account Manila Infra Prod Bronze	AWS Account Membership Platform Prod Bronze	AWS Account Mobile Apps Prod Bronze	AWS Account Monitoring Prod Bronze	AWS Account NAR Lantern Prod Bronze	AWS Account Networks Prod Bronze	AWS Account Next Prod Bronze	AWS Account Operations Reliability Prod Bronze	AWS Account OS Management Windows OnPrem Prod Bronze	AWS Account SFTP Prod Bronze	AWS Account Specialist Titles Prod Bronze	AWS Account Video Prod Bronze	AWS Composer Governance Bronze	AWS Composer Resources Bronze	AWS Governator Bronze	AWS MNL Tape Storage Gateway Bronze	AWS Workspaces (Editorial) Bronze	AWS Workspa (General) Bronze
B2C Fulfilment Service	Barrier Guru	Basecamp	bivalve	Biz Ops Admin	Biz Ops API	Biz Ops DNS Importer	Biz Ops Fastly	Biz Ops Github Importer	Biz Ops Monitoring Importer	Biz Ops Schema	Biz Ops Search	Biz Ops Snyk Importer	Biz Ops Statics	Blogs	CardKit	Casper (JAMF Pro)	Change API	Change request view	Chart.io

Monitoring All The Things

1. Legacy Monitoring Systems
2. Current Monitoring Approaches
3. Monitoring for the Future

1. Legacy Monitoring Systems

Be upfront about legacy

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Actively Encouraged

vs

Supported for Legacy

FT
FINANCIAL TIMES

Healthcheck

Recommended

Healthchecks are JSON endpoints serving over http/s which conform to the FT Healthcheck standard.

They are used to monitor your system's health in-depth, based on the system's view of things.

Add a new healthcheck

Pingdom

Recommended

Pingdom is a third-party tool which will check your website from locations around the world.

Guide to pingdom checks

CloudWatch Alarm

Recommended

AWS CloudWatch Alarms are the built-in AWS tool for alerts.

Alarms are often the simplest solution to monitoring AWS infrastructure, particularly databases and lambda functions which only expose metrics in CloudWatch out-of-the-box.

Guide to CloudWatch Alarms

Grafana Alerts

Recommended

Grafana is a metric analytics and visualization suite. It is used for visualizing time series data for infrastructure and application analytics.

Alerting in Grafana allows you to attach rules to your dashboard panels. You can read more about Alerting in Grafana in the official Grafana docs.

Guide to Grafana alerts

Orion Solarwinds

Orion is Solarwinds' offering for monitoring network metrics.

Orion is very much a networks monitoring solution, which we only recommend for that space. You can find out more at Solarwinds.

Runbook to Solarwinds

Nagios

Deprecated

Nagios was a monitoring system used to monitor systems deployed onto FT Platform.

This approach is no longer supported, so please refrain from creating new nagios boxes.

List of test nagios boxes

List of prod nagios boxes

Zabbix

Deprecated

Zabbix is a monitoring system for monitoring infrastructure.

As part of our cloud-only strategy, we do not recommend adding anything new to Zabbix.

Zabbix User Guide

Pingdom

Recommended

Pingdom is a third-party tool which will check your website from locations around the world.

Guide to pingdom checks

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Deprecated

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Zabbix User Guide

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Human reactions, not theoretical concepts

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It’s okay to hardcode your config

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```
    - 10.171.30.111
  labels:
    system: omapps-nagios
    observe: yes
- targets:
    - 10.118.120.30
    - 10.117.116.21
  labels:
    system: smtp-service
    observe: yes
- targets:
    - 10.117.120.31
    - 10.118.116.130
  labels:
    system: meth-arch
    observe: yes
- targets:
    - 10.117.120.10
    - 10.118.116.112
  labels:
    system: meth-swing
    observe: yes
- targets:
    - 10.117.120.53
    - 10.118.116.19
    - 10.118.116.25
    - 10.117.120.48
  labels:
    system: meth-wires
    observe: yes
- targets:
    - 10.170.28.70
  labels:
    system: ft-live
    observe: yes
- targets:
    - 10.170.28.124
  labels:
    system: ned
    observe: yes
```

250 lines of hardcoded yaml

Legacy systems rarely change

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A small amount of friction makes people stop and think

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Delete monitoring config as part of system decommissioning

Code | Issues 1 | Pull requests 3 | Actions | Security | Insights | Settings

Remove nagios checks for decommissioned services #219

Edit

Merged **ericanand** merged 2 commits into `master` from `remove-deprecated-memb-services` 12 days ago

Conversation 3 | Commits 2 | Checks 2 | Files changed 2 +0 −10

Changes from **all commits** | File filter... | Jump to... | 0 / 2 files viewed | Review changes

5 prometheus/etc/prometheus/static-service-discovery/nagios-prod.yml — Viewed

```
@@ -106,11 +106,6 @@
    labels:
      system: deprovision-service
      observe: yes
- - targets:
-     - 10.118.118.59
-   labels:
-     system: ft-track
-     observe: yes
  - targets:
      - 10.118.122.14
      - 10.117.118.36
```

5 prometheus/etc/prometheus/static-service-discovery/nagios-test.yml — Viewed

```
@@ -58,11 +58,6 @@
    labels:
      system: deprovision-service
      observe: no
- - targets:
-     - ftmon04672-lvpr-uk-t.osb.ft.com
-   labels:
-     system: ft-track
-     observe: no
```

1. Legacy Monitoring Systems

- Be upfront about legacy
- Focus on human reactions
- It’s okay to hardcode your config

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2. Current Monitoring Approaches

Embellish your monitoring with metadata

FT.com Article Page
Basic Information
Contact Information
Related systems/products
Technical overview
Monitoring
Troubleshooting
Failover
Data recovery
Release
Key Management
More Information

FT.com Article Page

replaces Falcon

Edit this runbook | View system status in Heimdall

https://www.ft.com/content/00b2e3c8-e2b0-11e8-a6e5-792428919cee

A service that provides the user facing layer of articles for FT.com.

Basic Information

Code	next-article
Service tier	Platinum
Lifecycle stage	Production
Host platform	Heroku
Group	Customer Products
Contains personal data	No
Contains sensitive data	No
Last released to production	12 minutes ago

Embellish your monitoring with metadata.

- Why should we care about it?
- Who is relying on it?
- Who can help fix it?

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Don’t hardcode the metadata into your monitoring

Embellish your monitoring with metadata.

- Why should we care about it?
- Who is relying on it?
- Who can help fix it?

All of these can change independently of the tech

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Your Org Structure Will Change

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Make your config easy to change

Fill out a short survey to help us decide what to add to Biz Ops next It only takes 2 minutes

Welcome to Biz Ops, Luke

Cataloguing and connecting FT product & tech since 2018

Search Search

Our goal

To provide a single place to store information about how our people and technology relate to the various aspects of our business.

By representing this complex web of information as a graph, and providing tools to interact with it, we hope to make it easier to answer questions about our estate, and to identify and remediate problems.

Read more

Common actions

- Create a system record
- Create some other type of record
- Explore the API
- Generate a report from Biz Ops data
- Write a system runbook in the new RUNBOOK.md format

Get help

Things you're connected to

Teams

Reliability Engineering

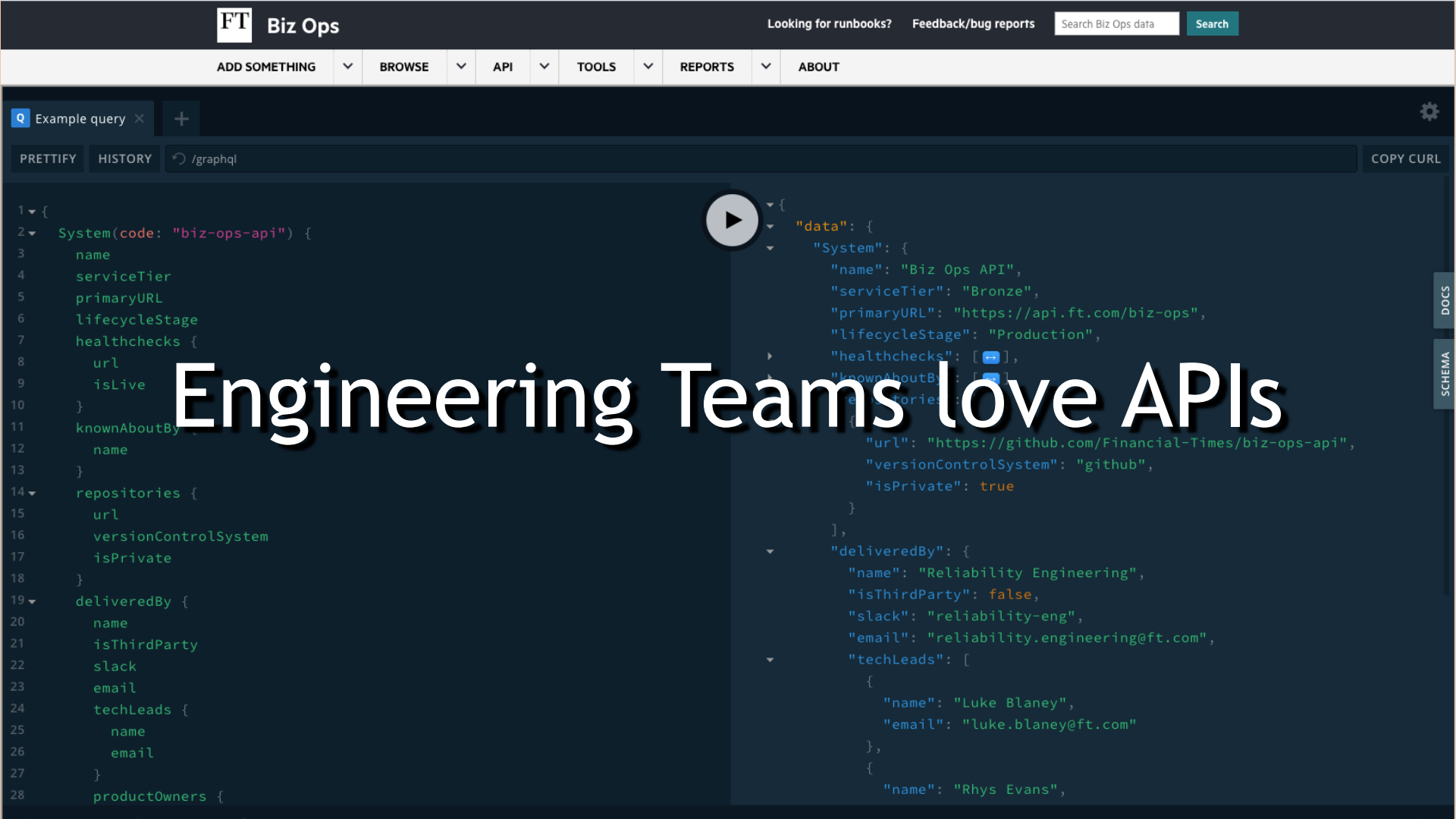
Products

Systems

Previously On... (Hackday Project), Single System

more

View more Edit



Engineering Teams love APIs

The config will change more often than you think

The config will have changed before you've even finished writing it

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Graph Model

=

Less to update

Your Org Structure Will Change

FT
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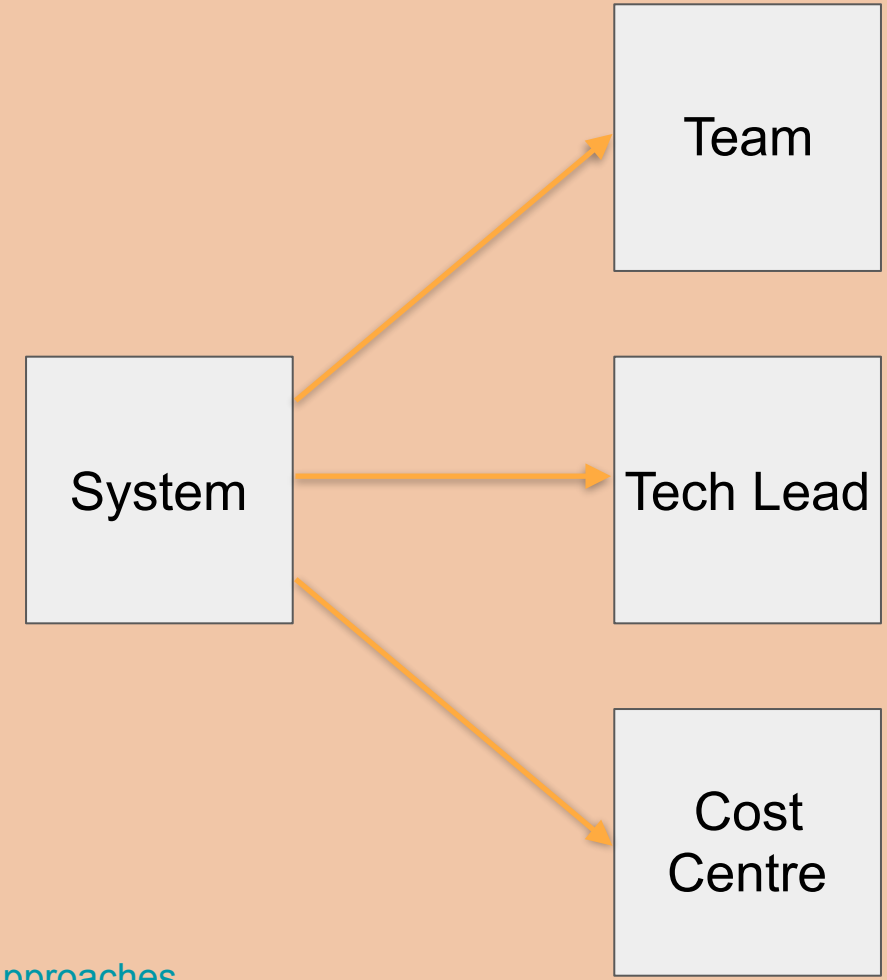

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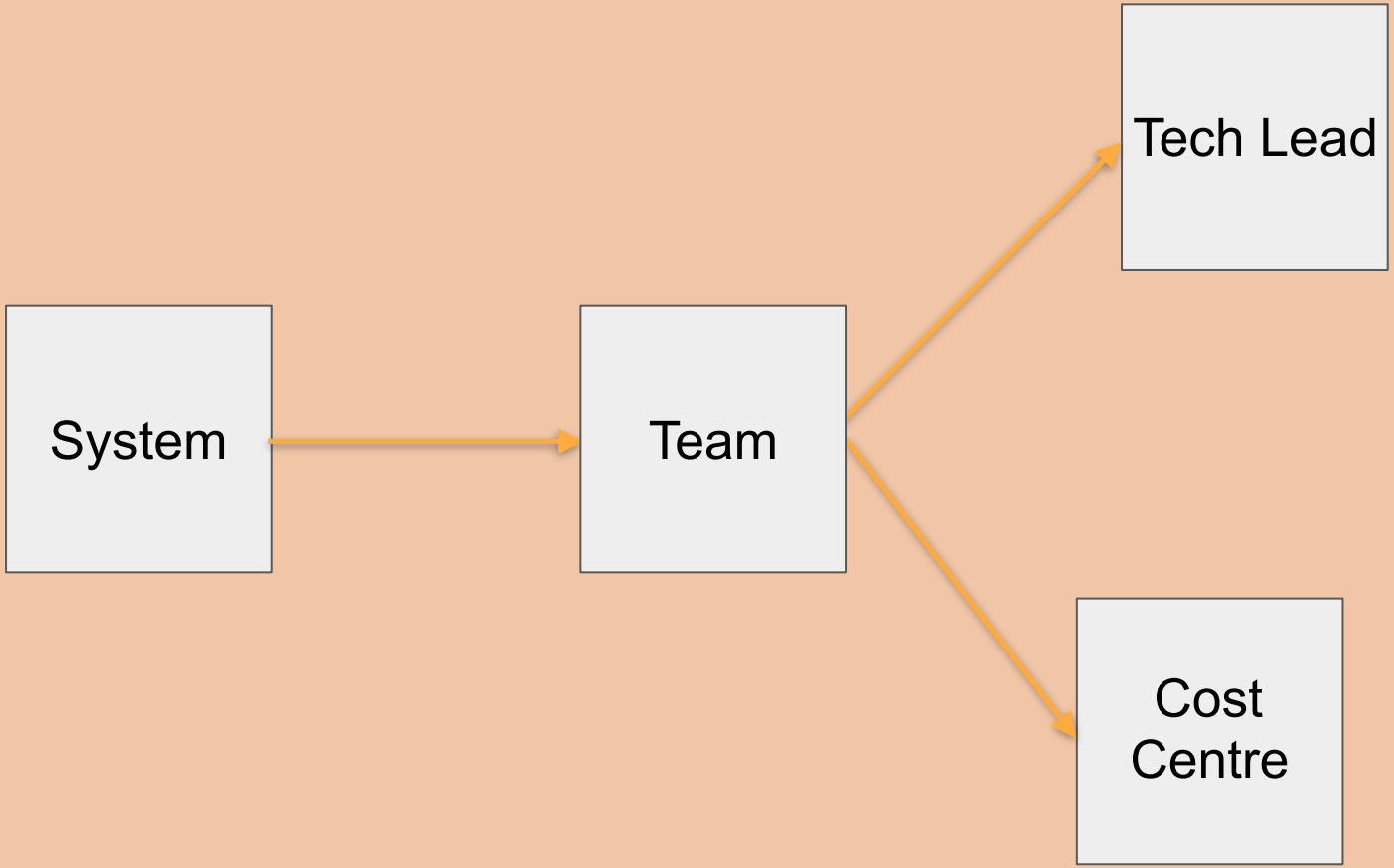

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Don't be a blocker to changes in the config

Trust teams running systems to manage their own config

Relying on low quality data will improve that data

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Team Dashboards

Dashboards are automatically generated based on team data discovered in Biz Ops. These show all systems for which the team is listed as a support contact.

Advertising FT Operations UK

- Advertising Operations

Customer Products

- Accounts
- Acquisition
- Ads & Privacy
- Apps
- Content Discovery
- Data Journalism Development
- Next
  - Core UI

Data (Customer Analytics and Research)

- Customer Analytics
  - Business Intelligence Team
  - Data Science team
- Data Products

Enterprise Services

- API Gateway
- AV Support
- AWS Enterprise Support Team
- Cloud Enablement
- Cloudhealth
- Cyber Security
- ES Common Tooling
- Foundation Services
- Working Environments

FT Core

- Content Programme
  - Ontotext 24 hour Support - Content
- Data Platform
- Membership
  - Membership - Access and Identity
  - Membership - Newspaper membership
  - Membership - Subscriptions and Payments
- Personally relevant FT

FT Group Products

- FT Specialist
  - FT Specialist Support
  - Specialist Titles
- Nikkei Asian Review
  - Medialogix (NAR)
- Wavteq

Internal Products

- B2B2020
- Blink CRM - Specialist Titles
- CRM Development
- Developer Experience
- Email Platform
- Envoy
- Finance Systems
- Internal Products
- IP Ads Tech
- Live Blogs
- People Tech
- Salesforce support
- Spark
- Team CMS

Operations & Reliability

- Operations Support
- Origami team
- Reliability Engineering

FT **Heimdall** Monitoring hub

FAQs | Add Monitoring | Report a bug

Team: Reliability Engineering

Last updated 4 seconds ago

System checks monitored by operations

0 unhealthy (sorted first) | 39 healthy

Biz Ops Runbooks Platinum	Heimdall UI Platinum	Monitoring Aggregation ECS Platinum	Monitoring Aggregation Prometheus Platinum	Prometheus Alertmanager Platinum	Prometheus Biz Ops Info Exporter Platinum
Prometheus CloudWatch Alarms Exporter Platinum	Prometheus Grafana Exporter Platinum	Prometheus Healthcheck Exporter Platinum	Prometheus Nagios Exporter Platinum	Prometheus Orion Exporter Platinum	Prometheus Pingdom Exporter Platinum
Prometheus Zabbix Exporter Platinum	GitHub Silver	Biz Ops Admin Bronze	Biz Ops API Bronze	Biz Ops DNS Importer Bronze	Biz Ops Fastly Bronze
Biz Ops Github Importer Bronze	Biz Ops Monitoring Importer Bronze	Biz Ops Schema Bronze	Biz Ops Search Bronze	Biz Ops Snyk Importer Bronze	Biz Ops Statics Bronze
Change API	Change request	CircleCI	CMDB3 stub	FT Nexus OSS	Healthcheck

2. Current Monitoring Approaches

- Embellish monitoring with metadata
- Don’t hardcode the metadata
- Improve data by relying on it

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3. Monitoring for the Future

Define the interface, not the implementation

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Standard JSON interface to surface monitoring

Content-Type	application/json;	The output must be JSON and UTF-8.
Date	*RFC 1123 date*	Required by HTTP 1.1. Used as lastUpdated date if Last-modified header is not present.
Last-Modified	*RFC 1123 date*	Optional, if present will provide a default for any lastUpdated values that are missing from checks.

Responses *should* avoid using chunked transfer-encoding to provide better compatibility with legacy clients or those with an incomplete implementation of the HTTP protocol.

If the client has been awaiting a response for more than 10 seconds, the application *should* abort the generation of the health check response, and instead return a 503 Service Unavailable response with either of the following in the response body:

- a notice of the timeout; or
- a valid health check response with those checks that timed out marked as failed with an appropriately informative check output field.

The application must not perform checks synchronously that may take more than 10 seconds to run under normal conditions. Checks that require a long runtime must be run asynchronously on a schedule, and the health check endpoint must report the result from the last time the check was run.

Syntax

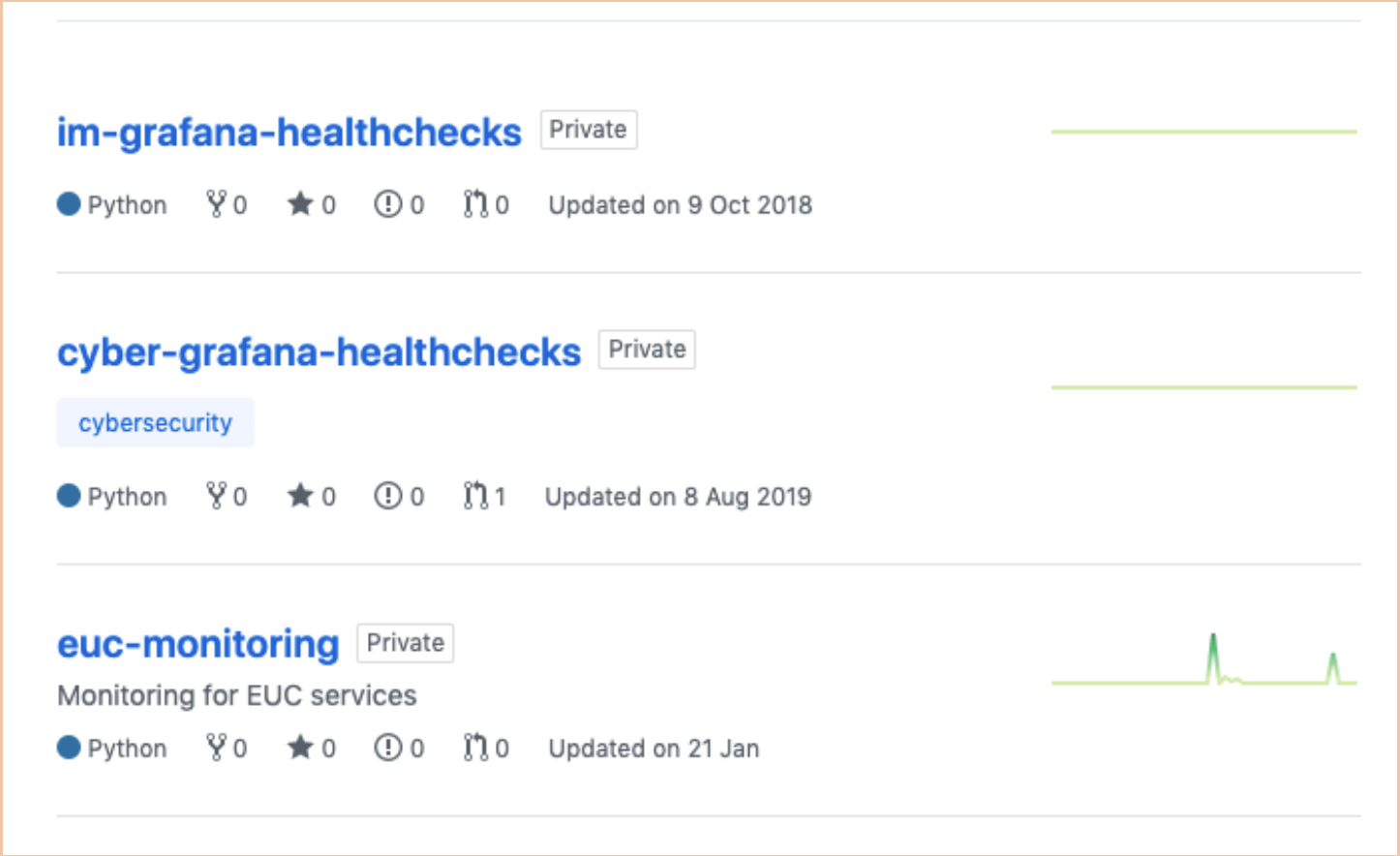
The response body *must* be valid JSON, encoded as UTF-8, and compliant with the following data model. A Type marked with * , is required.

Field / structure	Type (required ?)	Description
{		
`schemaVersion`	number*	Set to 1*.
`systemCode`	string*	A standard FT system code, as defined in the System Code Standard. Must exist in the Biz Ops data store.
`name`	string*	Name of application, including any appropriate qualifiers to make it uniquely identifiable. Must exist in the Biz Ops data store.
`description`	string	Description of application for support personnel in no more than 200 chars (good things to include are the end user functionality enabled by the service).
`checks [`	array*	A list of checks performed by this application.
{	object*	An object representing a single check.

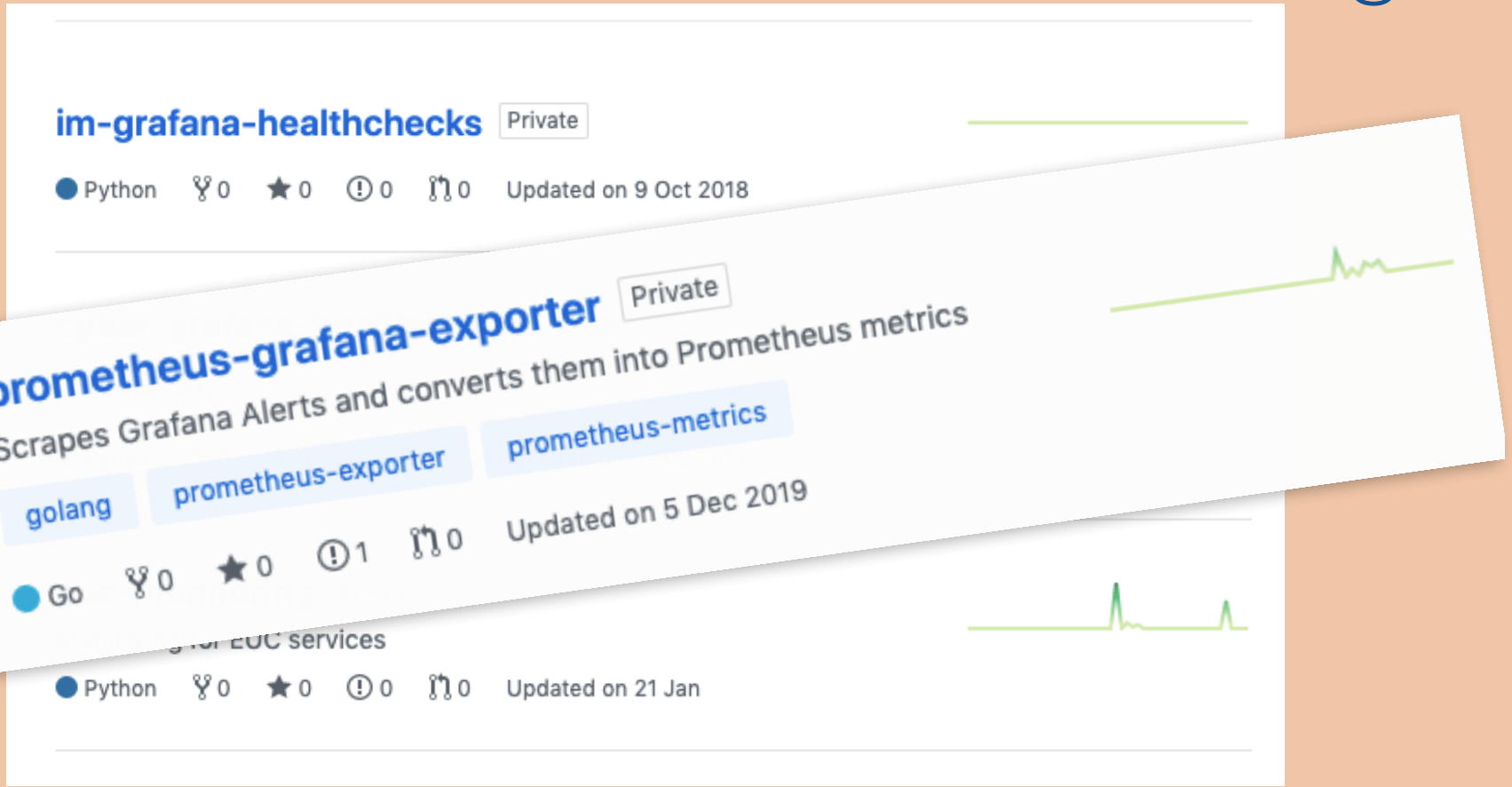
```
"systemCode": "ft-app-api",
"description": "API layer providing content, authentication and many other endpoints for the Web App",
"checks": [
  {
    "name": "Database connectivity is available and responding",
    "id": "database",
    "ok": true,
    "severity": 1,
    "businessImpact": "New web app installs will not open and existing installs will not be able to update their content.",
    "technicalSummary": "The web app api stores Content API caches in an RDS instance and also stores editorial actions (such as Morning or Weekend edition pu
    database.  Without connectivity the API will attempt to fall back to live Content API responses but this will be slow and missing state.  The database sho
    Amazon RDS instance in the same region - usually named webapp_mariab_(something).",
    "panicGuide": "The database will be a Amazon MariaDB RDS instance in the same environment and region as the servers being checked.  The instance should be
    from the front-end servers.  Daily backups snapshots should be available in the RDS interface to restore from if necessary.",
    "timeTaken": 8,
    "lastUpdated": "2020-02-24T18:52:57+00:00"
  },
  {
    "name": "Memcache connectivity is available and working",
    "id": "memcache",
    "ok": true,
    "severity": 2,
    "businessImpact": "The web app api will respond (very) slowly but should still function.",
    "technicalSummary": "Some web app api actions such as edition fetches - the structure endpoint - can result in thousands of Content API requests. These ar
    layer but are also stored in memcache for speed. Without memcache the app will fall back to database/capi layers but these are significantly slower.",
    "panicGuide": "The web app api uses a pair of dedicated memcache servers in each region; these should be accessible and the memcached service running. Che
    memcacheb resolve to on this server (ip-10-170-55-164).",
    "timeTaken": 2,
    "lastUpdated": "2020-02-24T18:52:57+00:00"
  },
  {
    "name": "Beanstalk queues are accessible and not full",
    "id": "beanstalk",
    "ok": true,
    "severity": 2,
    "businessImpact": "Web app articles may not be updated after they are first seen",
    "technicalSummary": "When outdated versions of articles are seen in the app api caches, a background update of the article is triggered by adding an entry
    queue. The processftapiqueue.php daemon on processing servers pulls entries from this queue and performs the actual update, so the background updates will
    queue is not accessible or filling up. (beanstalk-a:11300: 0 seconds old) (beanstalk-b:11300: 0 seconds old)",
    "panicGuide": "The web app api uses a pair of dedicated beanstalk servers in each region; these should be accessible and the beanstalkd service running. C
    beanstalk-b resolve to on this server (ip-10-170-55-164). The web app api also uses a processing/daemon server in each region (see app-marshal.ft.com for
```

Watch out for common patterns and make them easier

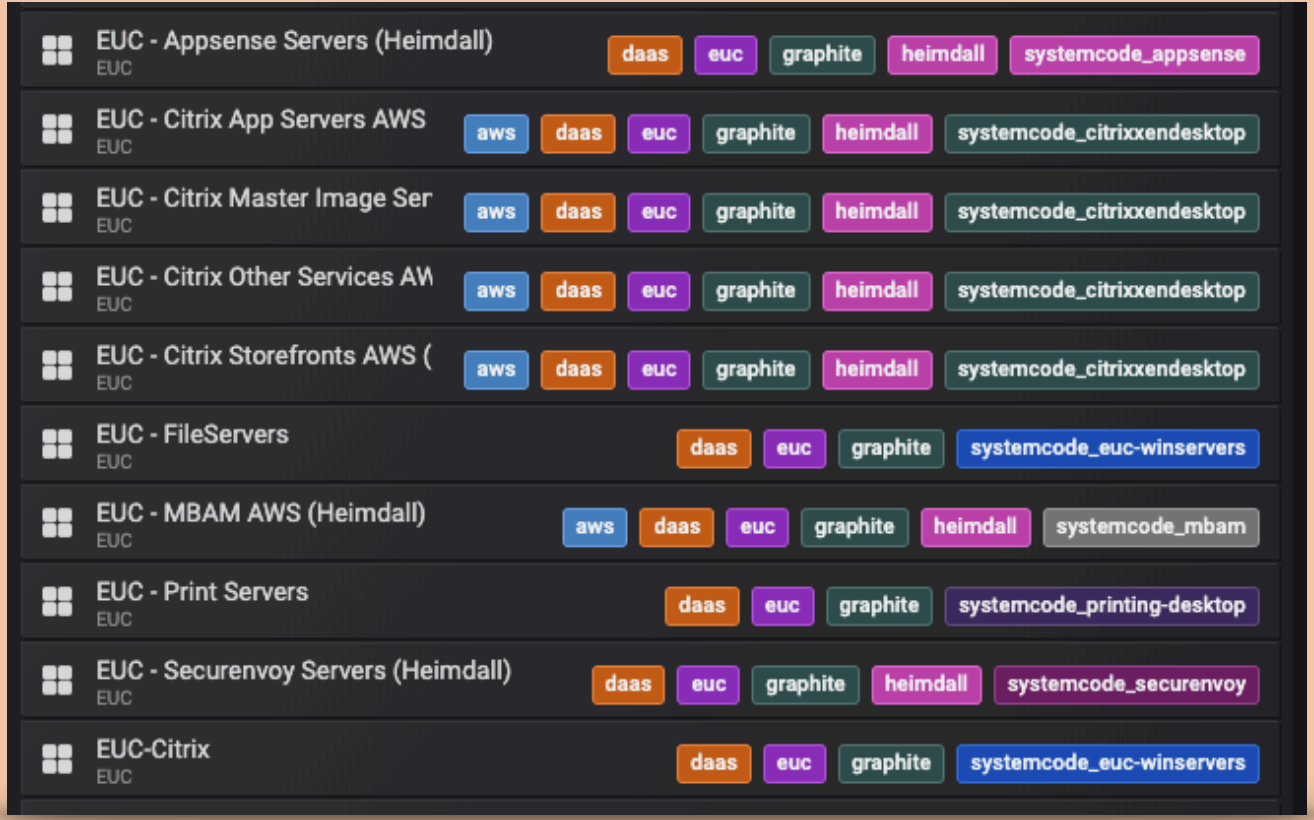
FT
FINANCIAL TIMES



FT FINANCIAL TIMES



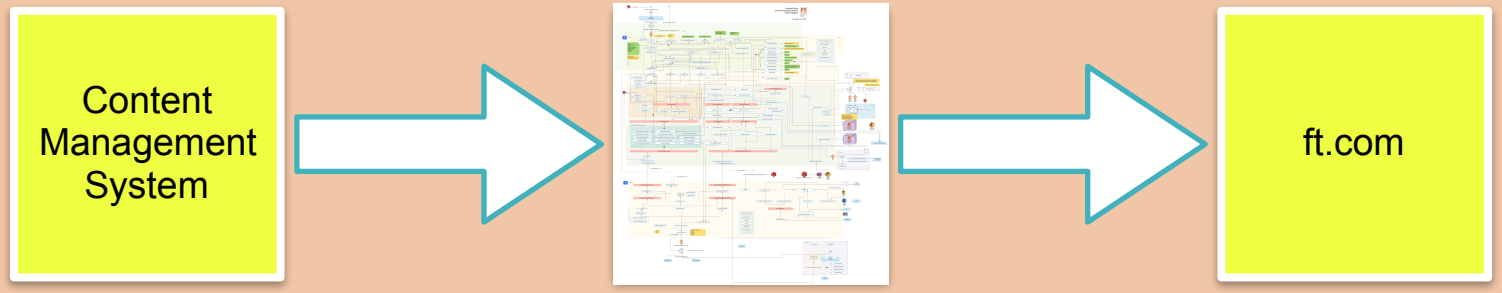
FT
FINANCIAL TIMES

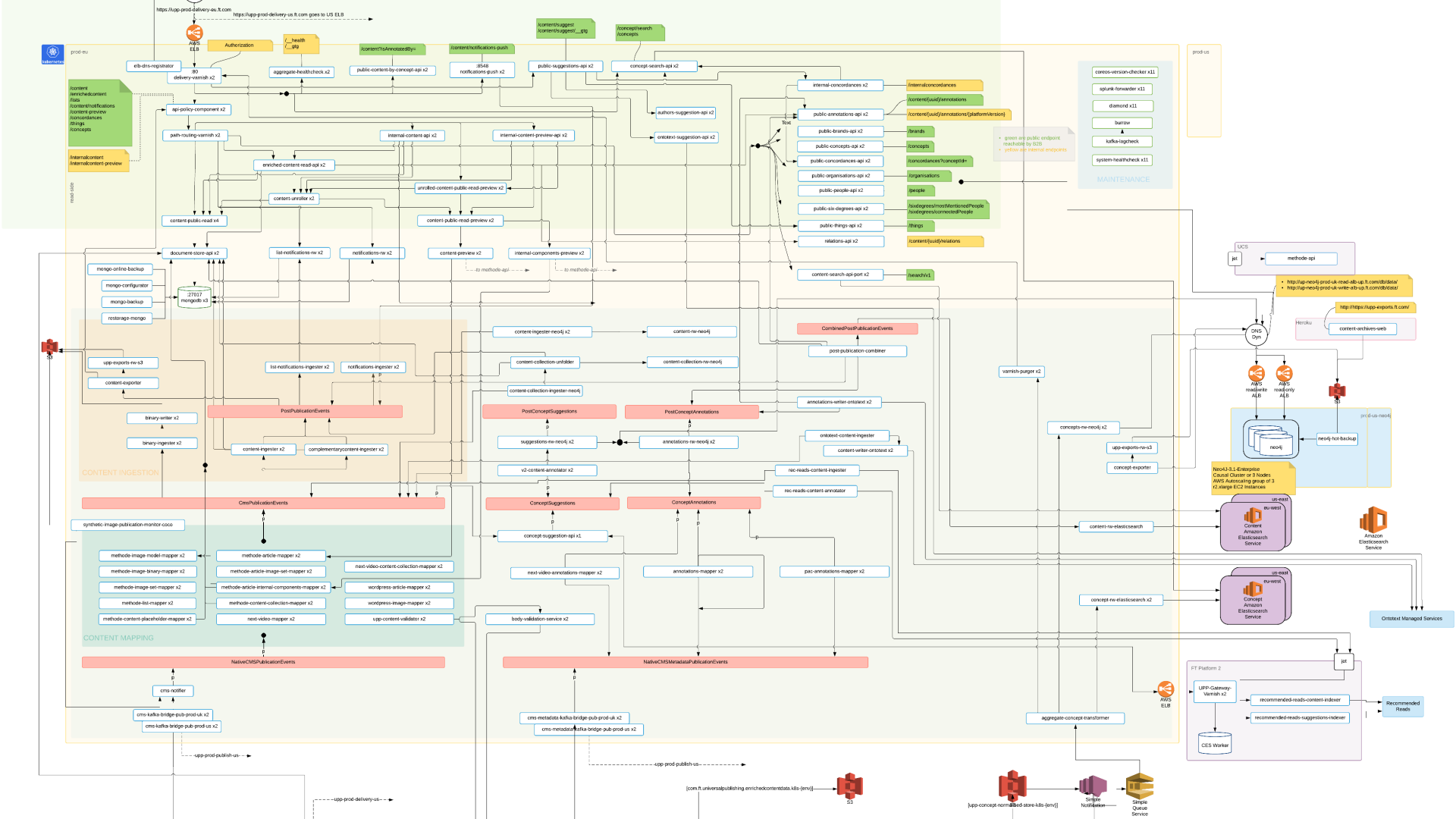


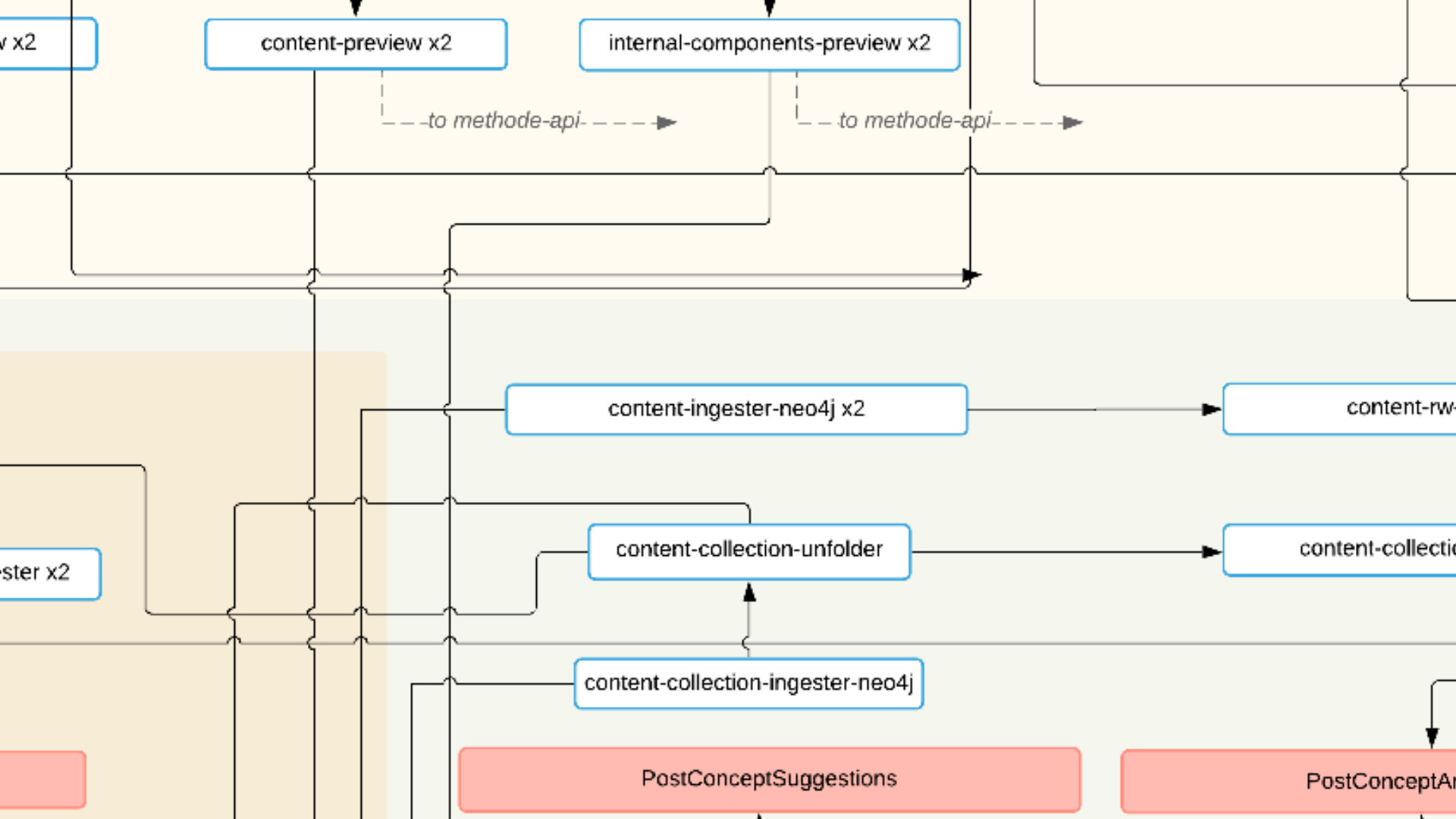
3. Monitoring for the Future

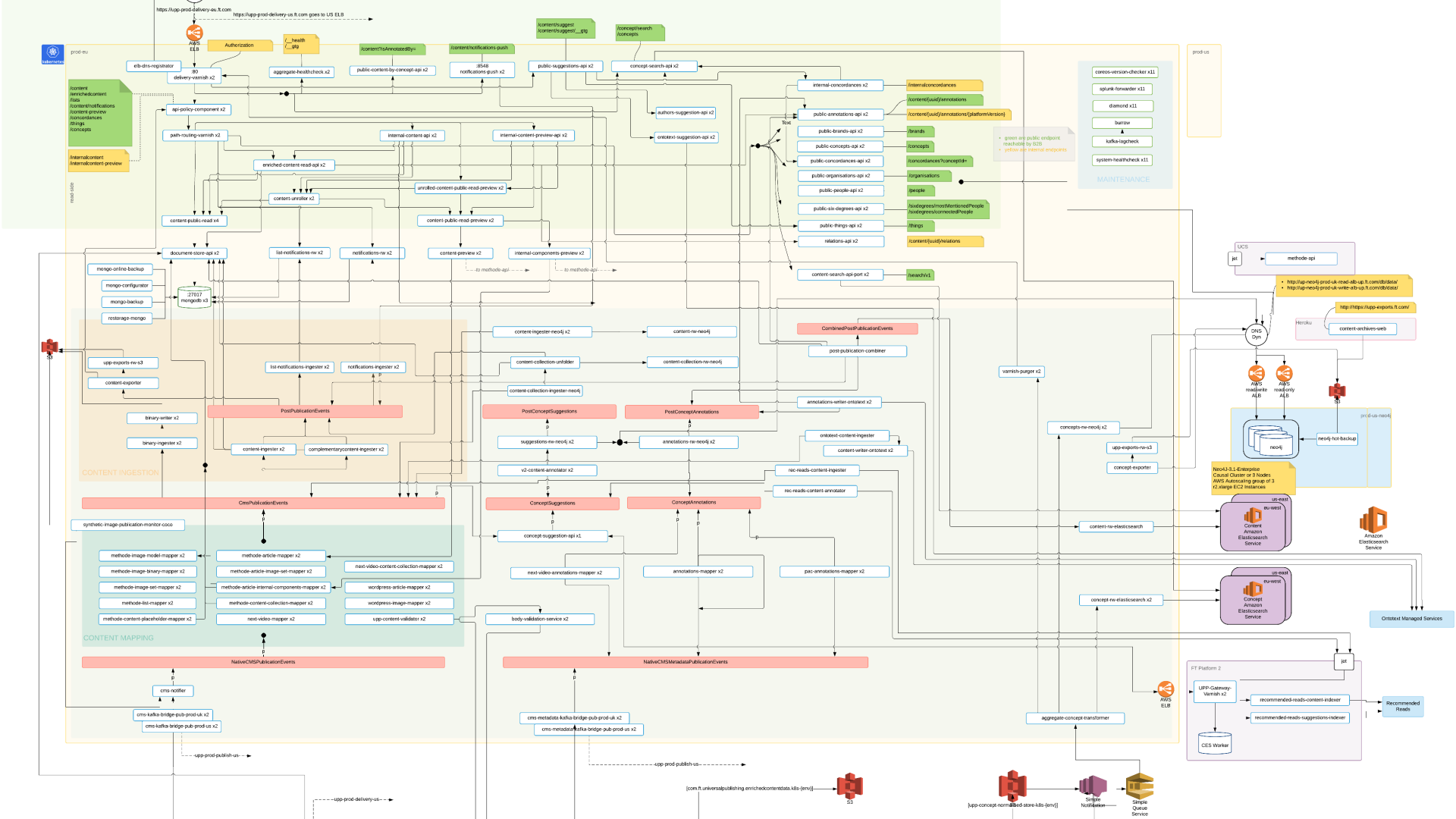
Think business capability, not microservice

Content Management System
Publishing Platform
ft.com


Content Management System
ft.com


https://upp-prod-delivery-eu.ft.com
https://upp-prod-delivery-us ft.com goes to US ELB
AWS ELB
Authorization
/__health
/__gtg
/content?isAnnotatedBy=
/content/notifications-push
/content/suggest
/content/suggest/__gtg
/concept/search
/concepts
kubernetes
prod-eu
elb-dns-registrator
80
delivery-varnish x2
aggregate-health-check x2
public-content-by-concept-api x2
8548
notifications-push x2
public-suggestions-api x2
concept-search-api x2
/content
/enrichedcontent
/lists
/content/notifications
/content-preview
/concordances
/things
/concepts
api-policy-component x2
path-routing-varnish x2
internal-content-api x2
internal-content-preview-api x2
authors-suggestion-api x2
ontotext-suggestion-api x2
/internalcontent
/internalcontent-preview
enriched-content-read-api x2
unrolled-content-public-read-preview x2
content-unroller x2
content-public-read x4
content-public-read-preview x2
read-side
document-store-api x2
list-notifications-rw x2
notifications-rw x2
content-preview x2
internal-components-preview x2
to methode-api
mongo-online-backup
mongo-configurator
mongo-backup
restorage-mongo
:27017
mongodb x3
S3
upp-exports-rw-s3
content-exportor
list-notifications-ingester x2
notifications-ingester x2
binary-writer x2
binary-ingester x2
PostPublicationEvents
content-ingester x2
complementarycontent-ingester x2
CONTENT INGESTION
content-ingester-neo4j x2
content-rw-neo4j
content-collection-unfolder
content-collection-rw-neo4j
content-collection-ingester-neo4j
PostConceptSuggestions
PostConceptAnnotations
suggestions-rw-neo4j x2
annotations-rw-neo4j x2
v2-content-annotator x2
CmsPublicationEvents
ConceptSuggestions
ConceptAnnotations
synthetic-image-publication-monitor-coco
methode-image-model-mapper x2
methode-image-binary-mapper x2
methode-image-set-mapper x2
methode-list-mapper x2
methode-content-placeholder-mapper x2
methode-article-mapper x2
methode-article-image-set-mapper x2
methode-article-internal-components-mapper x2
methode-content-collection-mapper x2
next-video-mapper x2
next-video-content-collection-mapper x2
wordpress-article-mapper x2
wordpress-image-mapper x2
upp-content-validator x2
CONTENT MAPPING
concept-suggestion-api x1
body-validation-service x2
next-video-annotations-mapper x2
annotations-mapper x2
pac-annotations-mapper x2
NativeCMSPublicationEvents
NativeCMSMetadataPublicationEvents
cms-notifier
cms-kafka-bridge-pub-prod-uk x2
cms-kafka-bridge-pub-prod-us x2
cms-metadata-kafka-bridge-pub-prod-uk x2
cms-metadata-kafka-bridge-pub-prod-us x2
upp-prod-publish-us
upp-prod-delivery-us
internal-concordances x2
public-annotations-api x2
public-brands-api x2
public-concepts-api x2
public-concordances-api x2
public-organisations-api x2
public-people-api x2
public-six-degrees-api x2
public-things-api x2
relations-api x2
/internalconcordances
/content/{uuid}/annotations
/content/{uuid}/annotations/{platformVersion}
/brands
/concepts
/concordances?conceptId=
/organisations
/people
/sixdegrees/mostMentionedPeople
/sixdegrees/connectedPeople
/things
/content/{uuid}/relations
Text
content-search-api-port x2
/searchv1
CombinedPostPublicationEvents
post-publication-combiner
annotations-writer-ontotext x2
ontotext-content-ingester
content-writer-ontotext x2
rec-reads-content-ingester
rec-reads-content-annotator
varnish-purger x2
concepts-rw-neo4j x2
upp-exports-rw-s3
concept-exporter
content-rw-elasticsearch
concept-rw-elasticsearch x2
aggregate-concept-transformer
AWS ELB
prod-us
coreos-version-checker x11
splunk-forwarder x11
diamond x11
burrow
kafka-lagcheck
system-healthcheck x11
MAINTENANCE
green are public endpoint reachable by S2S
yellow are internal endpoints
UCS
jkt
methode-api
http://up-neo4j-prod-uk-read-alb-up.ft.com/db/data/
http://up-neo4j-prod-uk-write-alb-up.ft.com/db/data/
http://https://upp-exports.ft.com/
Heroku
content-archives-web
DNS Dyn
AWS read/write ALB
AWS read-only ALB
S3
prod-us-neo4j
neo4j
neo4j-hot-backup
Neo4J-3.1-Enterprise
Causal Cluster or 3 Nodes
AWS Autoscaling group of 3
r2.xlarge EC2 instances
us-east
eu-west
Content Amazon Elasticsearch Service
Amazon Elasticsearch Service
Concept Amazon Elasticsearch Service
Ontotext Managed Services
jkt
FT Platform 2
UPP-Gateway-Varnish x2
recommended-reads-content-indexer
recommended-reads-suggestions-indexer
Recommended Reads
CES Worker
[com.ft.universalpublishing.enrichedcontentdata.k8s-{env}]
S3
[upp-concept-normalised-store-k8s-{env}]
Simple Notification
Simple Queue Service


v x2
content-preview x2
internal-components-preview x2
to methode-api
to methode-api
content-ingester-neo4j x2
content-rw
ester x2
content-collection-unfolder
content-collecti
content-collection-ingester-neo4j
PostConceptSuggestions
PostConceptA


https://upp-prod-delivery-eu.ft.com
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/__health
/__gtg
/content?isAnnotatedBy=
/content/notifications-push
/content/suggest
/content/suggest/__gtg
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methode-article-mapper x2
methode-article-image-set-mapper x2
methode-article-internal-components-mapper x2
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cms-kafka-bridge-pub-prod-us x2
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upp-prod-delivery-us
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public-brands-api x2
public-concepts-api x2
public-concordances-api x2
public-organisations-api x2
public-people-api x2
public-six-degrees-api x2
public-things-api x2
relations-api x2
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/content/{uuid}/annotations
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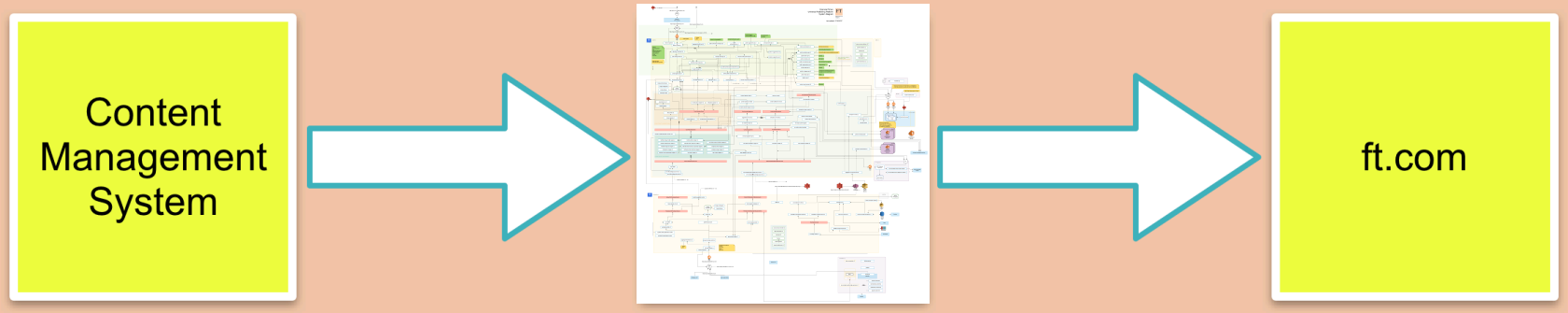
/brands
/concepts
/concordances?conceptId=
/organisations
/people
/sixdegrees/mostMentionedPeople
/sixdegrees/connectedPeople
/things
/content/{uuid}/relations
Text
content-search-api-port x2
/searchv1
CombinedPostPublicationEvents
post-publication-combiner
annotations-writer-ontotext x2
ontotext-content-ingester
content-writer-ontotext x2
rec-reads-content-ingester
rec-reads-content-annotator
varnish-purger x2
concepts-rw-neo4j x2
upp-exports-rw-s3
concept-exporter
content-rw-elasticsearch
concept-rw-elasticsearch x2
aggregate-concept-transformer
AWS ELB
prod-us
coreos-version-checker x11
splunk-forwarder x11
diamond x11
burrow
kafka-lagcheck
system-healthcheck x11
MAINTENANCE
green are public endpoint reachable by S2S
yellow are internal endpoints
UCS
jkt
methode-api
http://up-neo4j-prod-uk-read-alb-up.ft.com/db/data/
http://up-neo4j-prod-uk-write-alb-up.ft.com/db/data/
http://https://upp-exports.ft.com/
Heroku
content-archives-web
DNS Dyn
AWS read/write ALB
AWS read-only ALB
S3
prod-us-neo4j
neo4j
neo4j-hot-backup
Neo4J-3.1-Enterprise
Causal Cluster or 3 Nodes
AWS Autoscaling group of 3
r2.xlarge EC2 instances
us-east
eu-west
Content Amazon Elasticsearch Service
Amazon Elasticsearch Service
Concept Amazon Elasticsearch Service
Ontotext Managed Services
jkt
FT Platform 2
UPP-Gateway-Varnish x2
recommended-reads-content-indexer
recommended-reads-suggestions-indexer
Recommended Reads
CES Worker
[com.ft.universalpublishing.enrichedcontentdata.k8s-{env}]
S3
[upp-concept-normalised-store-k8s-{env}]
Simple Notification
Simple Queue Service



3. Monitoring for the Future

Content Management System
Publishing Platform
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Can we publish news?

3. Monitoring for the Future

- Define the interface
- Make common patterns easier
- Think Capabilities, not Microservices

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Be upfront about legacy

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Embellish your monitoring with metadata

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Think Business Capability, not microservice

Questions?