



Preparing for the Unexpected

Samuel Parkinson

samuel.parkinson@ft.com

[#qconlondon](#) [#prepfortheunexpected](#)

Photo by [Hush Naidoo](#) on [Unsplash](#)



Let's start with a story

#qconlondon #prepfortheunexpected

The logo for the Financial Times (FT), consisting of the letters 'FT' in a black serif font, centered within an orange square.

What's the worst thing that could happen?

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The time we accidentally DOS attacked [REDACTED] by hammering the purging service #165

 Open GlynnPhillips opened this issue on Feb 15, 2018 · 0 comments

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FT

The one where we really wanted people to accept cookies #227



Open

sjparkinson opened this issue on Feb 7, 2019 · 3 comments

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The one where we lost the ft.com domain #21

! Open

efinlay24 opened this issue on Jan 23 · 1 comment

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FT

Season 1 (1994–95) [edit]							
Main article: <i>Friends</i> (season 1)							
No. overall	No. in season	Title	Directed by	Written by	Original air date	Prod. code	US viewers (millions)
1	1	"The Pilot" ^[a]	James Burrows	David Crane & Marta Kauffman	September 22, 1994	456650	21.5 ^[3]
2	2	"The One with the Sonogram at the End"	James Burrows	David Crane & Marta Kauffman	September 29, 1994	456652	20.2 ^[3]
3	3	"The One with the Thumb"	James Burrows	Jeffrey Astrof & Mike Sikowitz	October 6, 1994	456651	19.5 ^[3]
4	4	"The One with George Stephanopoulos"	James Burrows	Alexa Junge	October 13, 1994	456654	19.7 ^[3]
5	5	"The One with the East German Laundry Detergent"	Pamela Fryman	Jeff Greenstein & Jeff Strauss	October 20, 1994	456653	18.6 ^[3]
6	6	"The One with the Butt"	Arlene Sanford	Adam Chase & Ira Ungerleider	October 27, 1994	456655	18.2 ^[3]
7	7	"The One with the Blackout"	James Burrows	Jeffrey Astrof & Mike Sikowitz	November 3, 1994	456656	23.5 ^[3]
8	8	"The One Where Nana Dies Twice"	James Burrows	Marta Kauffman & David Crane	November 10, 1994	456657	21.1 ^[3]
9	9	"The One Where Underdog Gets Away"	James Burrows	Jeff Greenstein & Jeff Strauss	November 17, 1994	456659	23.1 ^[3]
10	10	"The One with the Monkey"	Peter Bonerz	Adam Chase & Ira Ungerleider	December 15, 1994	456661	19.9 ^[4]
11	11	"The One with Mrs. Bing"	James Burrows	Alexa Junge	January 5, 1995	456660	26.6 ^[4]
12	12	"The One with the Dozen Lasagnas"	Paul Lazarus	Jeffrey Astrof & Mike Sikowitz & Adam Chase & Ira Ungerleider	January 12, 1995	456658	24.0 ^[4]
13	13	"The One with the Boobies"	Alan Myerson	Alexa Junge	January 19, 1995	456664	25.8 ^[4]
14	14	"The One with the Candy Hearts"	James Burrows	Bill Lawrence	February 9, 1995	456667	23.8 ^[4]
15	15	"The One with the Stoned Guy"	Alan Myerson	Jeff Greenstein & Jeff Strauss	February 16, 1995	456663	24.8 ^[4]
16	16	"The One with Two Parts: Part 1"	Michael Lembeck	Marta Kauffman & David Crane	February 23, 1995	456665A	26.1 ^[4]
17	17	"The One with Two Parts: Part 2"	Michael Lembeck	Marta Kauffman & David Crane	February 23, 1995	456665B	30.5 ^[4]
18	18	"The One with All the Poker"	James Burrows	Jeffrey Astrof & Mike Sikowitz	March 2, 1995	456662	30.4 ^[4]
19	19	"The One Where the Monkey Gets Away"	Peter Bonerz	Jeffrey Astrof & Mike Sikowitz	March 9, 1995	456668	29.4 ^[5]
20	20	"The One with the Evil Orthodontist"	Peter Bonerz	Doty Abrams	April 6, 1995	456669	30.0 ^[5]
21	21	"The One with the Fake Monica"	Gail Mancuso	Adam Chase & Ira Ungerleider	April 27, 1995	456671	28.4 ^[5]
22	22	"The One with the Ick Factor"	Robby Benson	Alexa Junge	May 4, 1995	456670	29.9 ^[5]

17:05



Andrew Jack



21 JANUARY 2020

22:19 ✓✓

Error 503 first byte timeout
first byte timeout

Guru Mediation:
Details: cache-lon4267-LON [1579645258](#)
[862376533](#)

Varnish cache server

22:21

that's just adding your email

22:21

#qconlondon #prepfor

FT



Alice Bartlett 🤔 22:06

sam if you happen to see this - there's a reeeeeeal [REDACTED] of an incident happening

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The FT.com zone was missing

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```
$ host www.ft.com
```

```
Host www.ft.com not found: 3(NXDOMAIN)
```


FT.com has over 5,100
subdomains 🦷

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This impacted the whole company

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Account Overview

Search: enter search term

Managed DNS

Account Overview

Manage DNS

Add-Ons

Manage Account

View Reports

Support

Account at a Glance

Managed DNS platform version 5.2.... - Thu, 30 Jan 2020 2000 +0000

Reports

Zones - 218 total

Create Zone

Name	Type	Status	
	Primary		Manage
ft.com	Primary		Manage
	Primary		Manage
	Primary		Manage
	Primary		Manage
	Primary		Manage
	Primary		Manage
	Primary		Manage
	Primary		Manage
	Primary		Manage

These are the 10 most recently modified zones. [View All Zones](#)

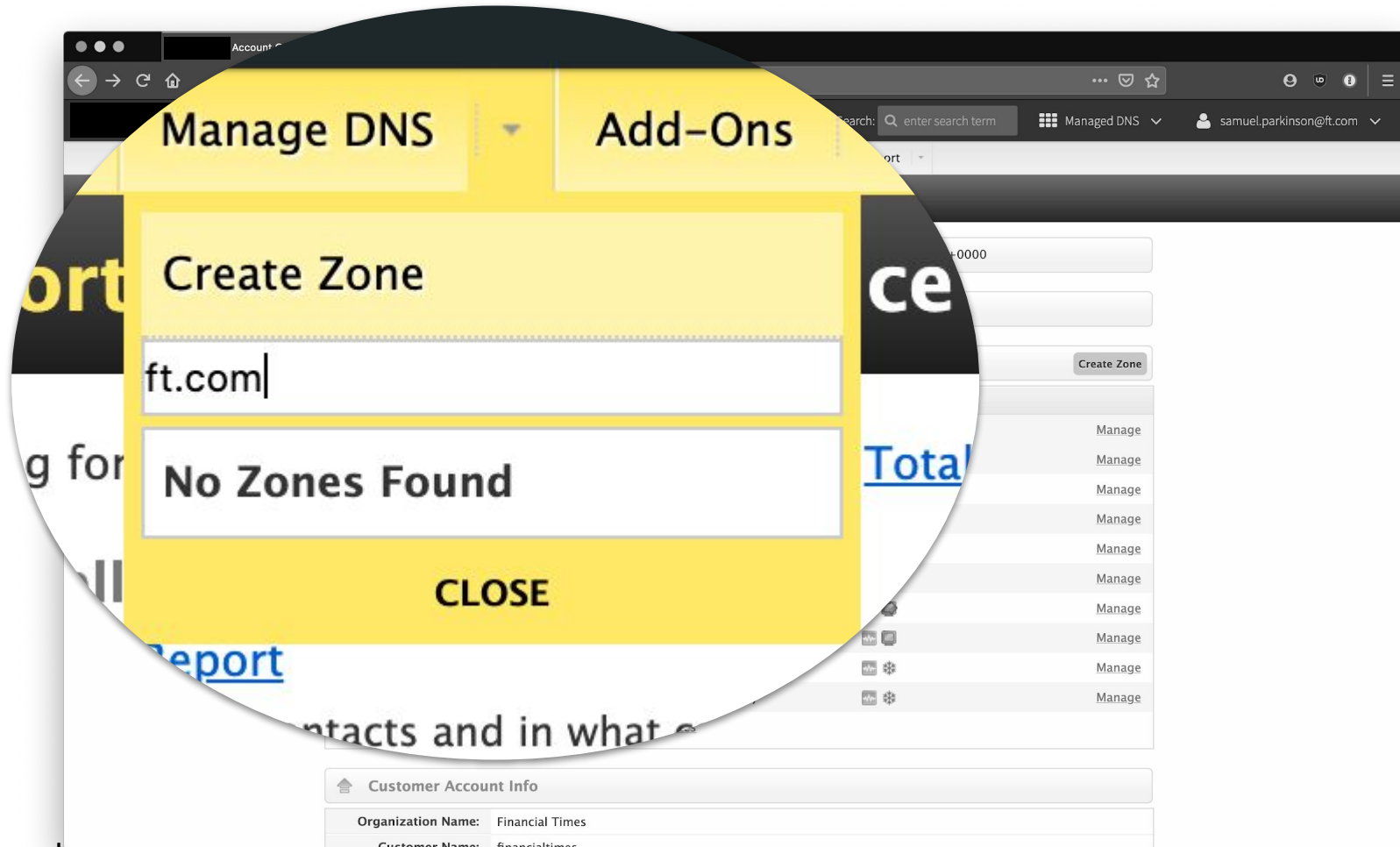
Customer Account Info

Organization Name: Financial Times

Customer Name: financialtimes

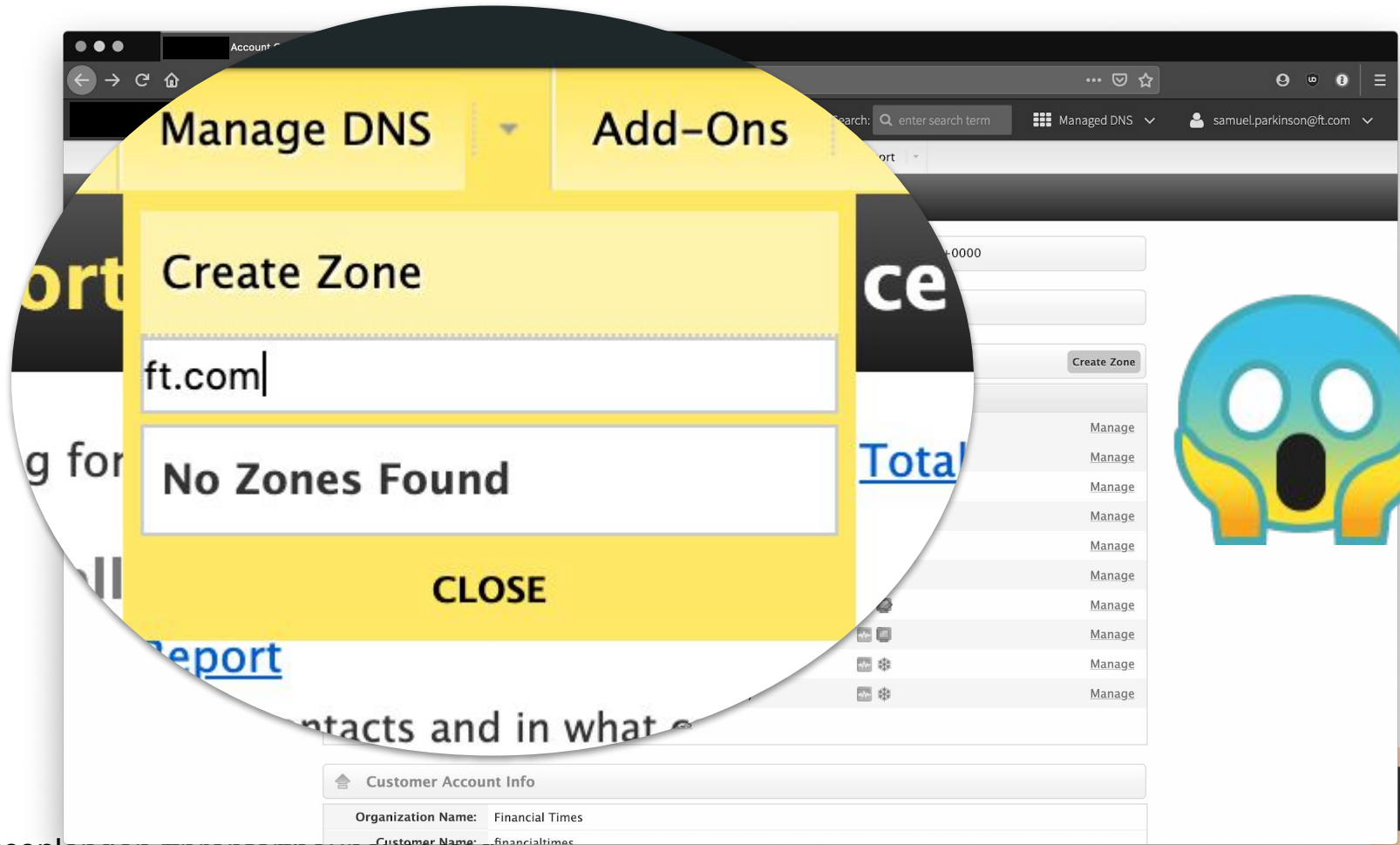
#qconlondon #preptorneunexpected

FT



#qconlondon #preptortneunexpected

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#qconlondon #preptortneunexpected

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We have never prepared
for such an incident

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It's a classic data loss situation

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FT

JT

+

Financial Times

Samuel Parkinson

Jump to...

Channels

globetrotter

dns-management

engineering

inc-http-ft-com-ft-com-z...

sourcing-jam

acquisition

newsletters2premium

technology-proposals

reliability-eng

snapshot-meeting

ip-people-tech

accessibility

#inc-http-ft-com-ft-com-zone-...

☆ | 👤 59 | 📎 34 | Network issues possibly d...

Tuesday, 21 January

Search

@ ☆ ⋮

Rob Godfrey 21:11

I think I have a zone dump from ~~mid-december~~ (edited)

Actually its from October 4th 2019

ft.com.zonefile (2).txt ▾

```
1 $ORIGIN ft.com.
2 @                  14400 SOA   ns1.p23.dynect.net. (
3                                postmaster.ft.com.      ; address of
   responsible party
4                                2019101672                ; serial
   number
5                                3600                      ; refresh
   period
```

Message #inc-http-ft-com-ft-com-zone-missing

📎 B I ↺ </> ↻ ⋮ ⋮ ⋮ 🗑

Aa @ 😊

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Our provider had a partial backup

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But critical records we
used for DNS load
balancing were missing



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About 10 people worked
to resolve the incident

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And over 30 people were
online to follow along

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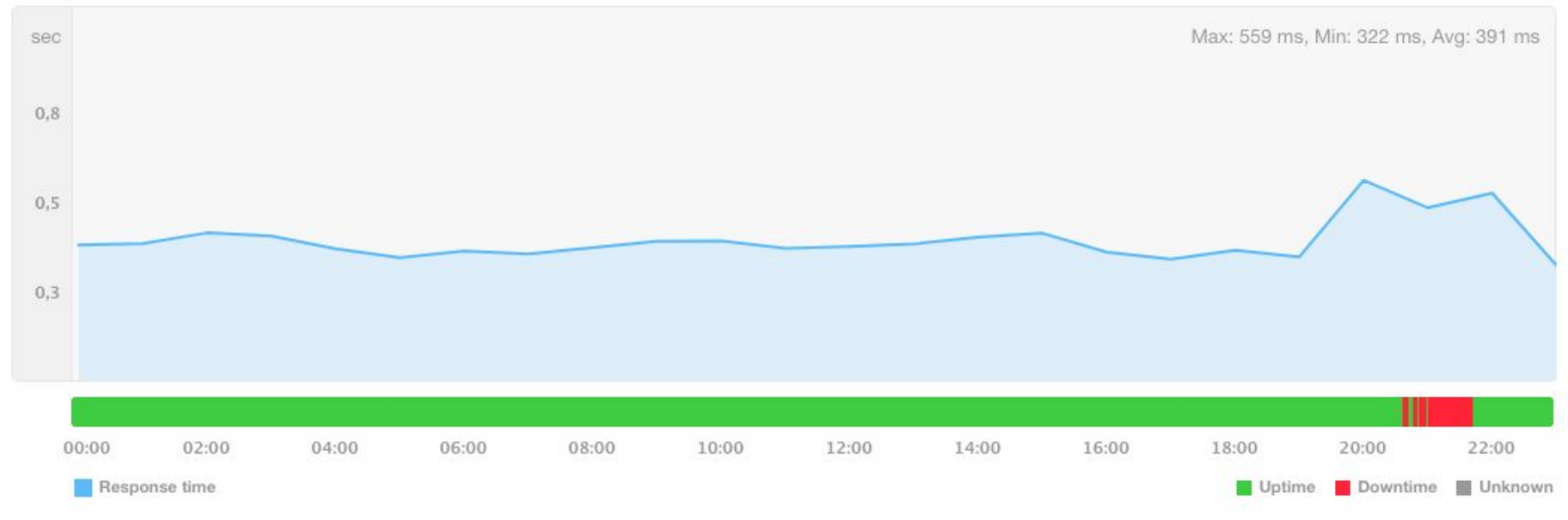
Most were not called, but
still volunteered their time

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FT.com (UK Home Page)

type: HTTP, host: www.ft.com



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4h 30m

The first hour was a total outage.

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Lack of panic in the moment

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It was a slick operation
and we recovered

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It took restoring from a
backup and manual entry
to get there

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We were focused on
recovery, not what
happened

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People were joining the
incident to learn

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Financial Times Samuel Parkinson

Jump to...

Channels

- # globetrotter
- # dns-management
- # engineering
- # inc-http-ft-com-ft-com-z...
- # sourcing-jam
- # acquisition
- # newsletters2premium
- # technology-proposals
- # reliability-eng
- # snapshot-meeting
- # ip-people-tech
- # accessibility
- # announcements
- # customer-products-incid

More unread messages


#inc-http-ft-com... 59 34 Net...

Wednesday, 22 January

Rhys Evans 00:09

go team

Posted using /giphy (2 MB)



6 2 3 FT 3 2

Message #inc-http-ft-com-ft-com-zone-missing

Aa @

#qconlondon #prepfortheunexpected

FT

FT

JT

+

Financial Times

Samuel Parkinson

Jump to...

Channels

globetrotter

dns-management

engineering

inc-http-ft-com-ft-com-z...

sourcing-jam

acquisition

technology-proposals

newsletters2premium

reliability-eng

snapshot-meeting

ip-people-tech

accessibility

announcements

customer-products-incid...

inter-team-comms

n-messaging-upgrade-pl...

#inc-http-ft-com-ft-c...

59 | 34 | Network is...

Search

@

☆

⋮

Thursday, 23 January

Euan Finlay 15:47

@here - as a thank you for everyone's help the other night, [REDACTED] has magically appeared with a huge quantity of brownies, gingerbread people and vegan chocolate cupcakes 🧁

they are currently located on the lower ground floor in the O&R area 👍 (edited)

IMG_20200123_154408.jpg

👍 4 🧁

Message #inc-http-ft-com-ft-com-zone-missing

B *I*

Aa @ 😊

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This is where we are today

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FINANCIAL TIMES

Financial Times
https://www.ft.com

FTSE 100 +0.57%
S&P 500 +0.92%
Euro/Dollar -0.33%
Pound/Dollar -0.24%
Brent Crude Oil +3.85%
Visit Markets Data

FINANCIAL TIMES
myFT

HOME WORLD US COMPANIES TECH MARKETS GRAPHICS OPINION WORK & CAREERS LIFE & ARTS HOW TO SPEND IT
Portfolio Account Settings

fastFT
LinkedIn chief executive Jeff Weiner to step aside 17M AGO
US Treasury provides details of plans to revive 20-year bond 2H AGO
US stocks flirt with record highs 3H AGO
GM forecasts flat earnings for 2020 3H AGO

Coronavirus

China energy groups braced for 25% fall in domestic oil demand

Refineries expect coronavirus to trigger drop in national consumption equivalent to 3% of global need

NEW 29 MINUTES AGO



- Coronavirus latest: World Health Organization plays down treatment hopes
- Chinese county 'locked down' over new coronavirus fears
- Coronavirus: Hong Kong imposes quarantine on mainland China arrivals

LIVE



Coronavirus

Coronavirus latest: World Health Organization plays down treatment hopes

Reports of a breakthrough boost stocks and commodities

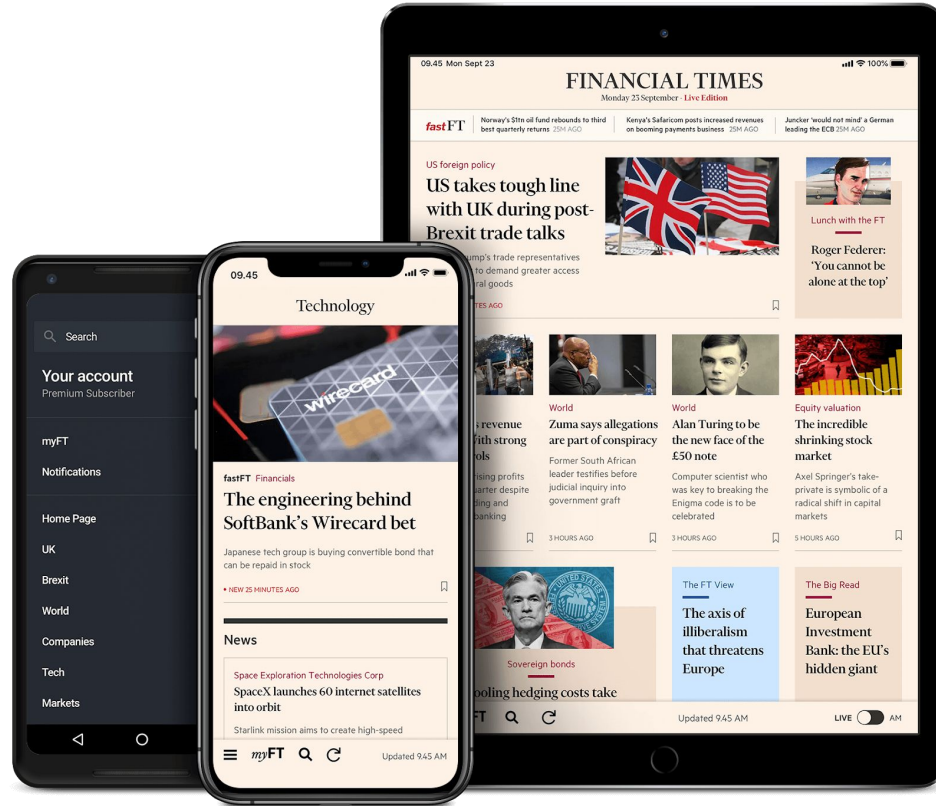
Feedback



#qcomend #preprod unexpected

FT



#qconlondon #prepfortheunexpected



Photo by [Victor Garcia](#) on [Unsplash](#)

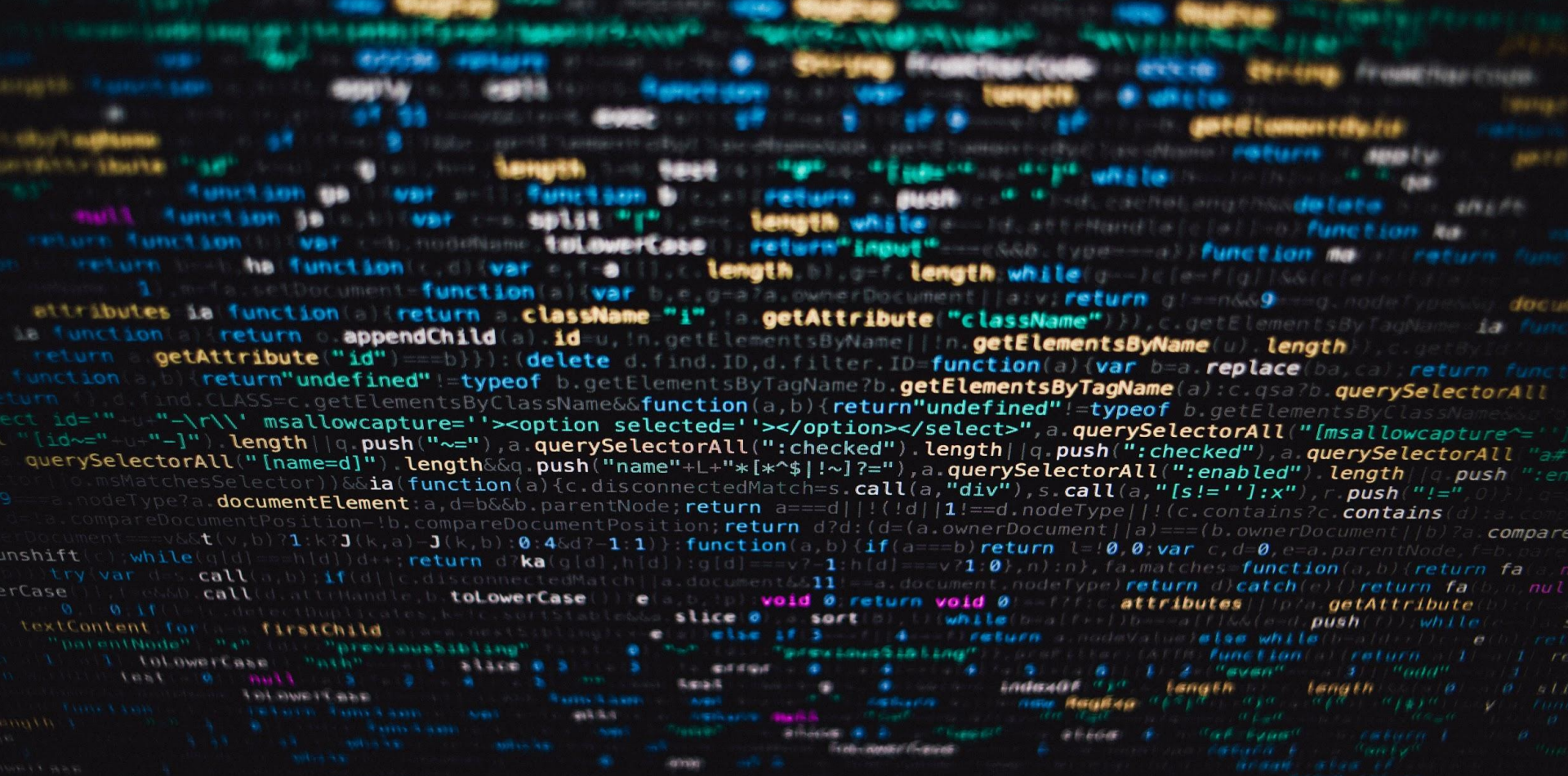


Photo by [Markus Spiske](#) on [Unsplash](#)

0. How do we do on-call?
1. Our incident management challenges
2. Making out-of-hours sustainable
3. The results and takeaways

0. How do we do on-call?

1. Our incident management challenges
2. Making out-of-hours sustainable
3. The results and takeaways



A diagram consisting of six colored ovals arranged in a circular pattern around a central blue oval. The ovals are: a purple oval at the top-left, a teal oval at the top, an orange oval at the top-right, a dark blue oval at the bottom-right, a dark red oval at the bottom-left, and a central blue oval. Each oval contains white text representing a business segment.

FT Core

Internal
Products

Enterprise
Services

Customer
Products

Operations
& Reliability

FT Group
Products

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FT

We are  Customer
Products

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FT

45 engineers and counting



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FT

And we own about
180 systems

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View Team Next - Biz Ops admin

https://biz-ops.in.ft.com/Team/next

Team: Next

- General information
- People
- Place in the FT
- System ownership
- Miscellaneous

System ownership

Delivers systems

AWS Account Next Prod	Bronze	Production
AWS Account Video Prod	Bronze	Production
Alphaville	Bronze	Production
Ammit	Bronze	Production
Customer Products Internal Site	Bronze	Preproduction
Customer Products Tako	Bronze	Production
Enterprise Tools	Bronze	Production
FT Alphaville ES Interface Service	Bronze	Production
FT Alphaville Marketslive service	Bronze	Preproduction
FT Audio Trigger	Bronze	Production
FT.com	Platinum	Production
FT.com Article Page	Platinum	Production
FT.com Article Preview	Bronze	Production
FT.com Elasticsearch Interface	Platinum	Production
FT.com Error Pages	Platinum	Production
FT.com Fastly to Graphite	Bronze	Production
FT.com Flags API (Write)	Bronze	Production
FT.com Live Event API	Platinum	Production
FT.com Preflight	Platinum	Production
FT.com Router	Platinum	Production
FT.com Service Registry	Platinum	Production

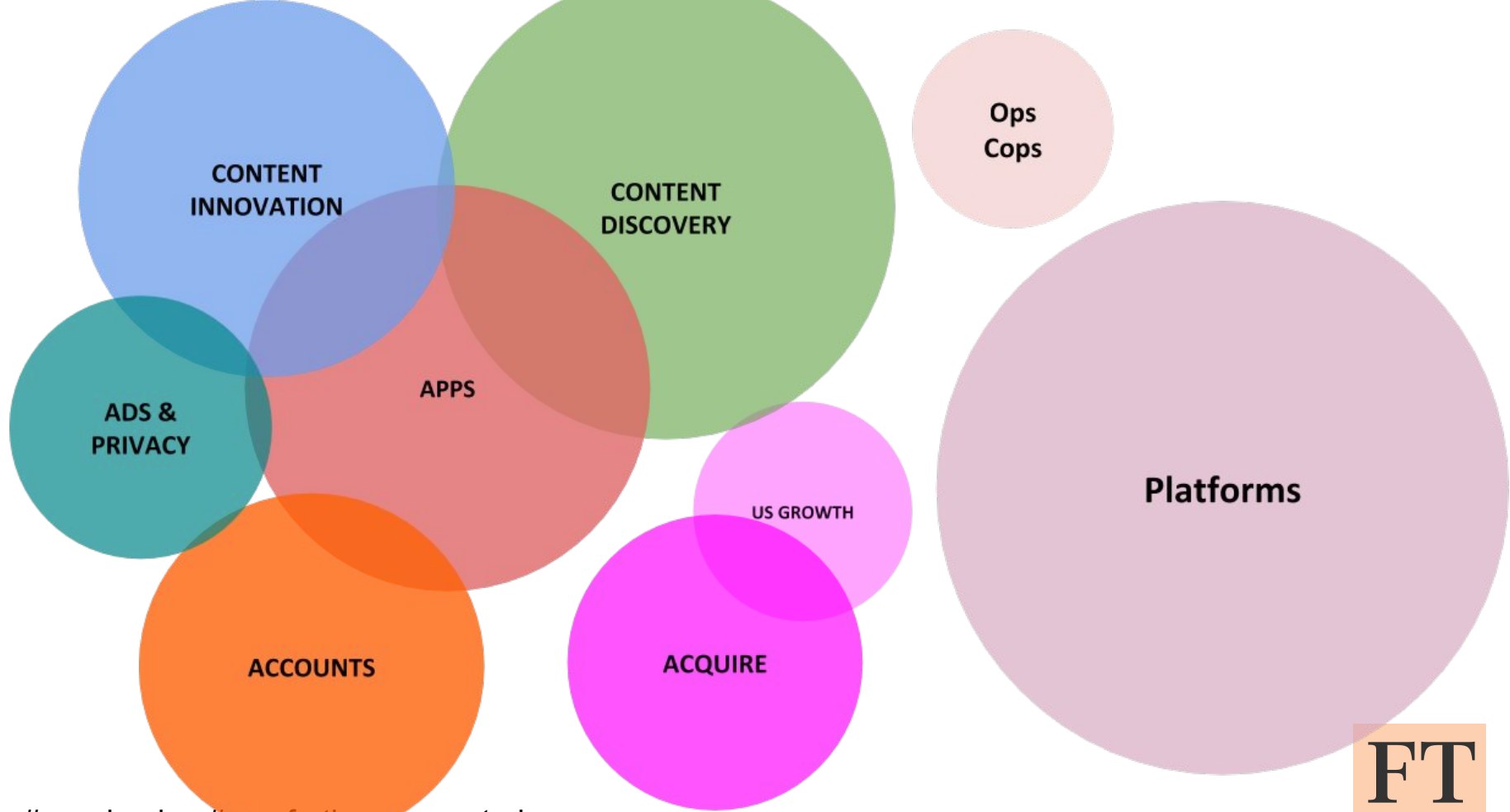
#qcommon #preproduction

FT

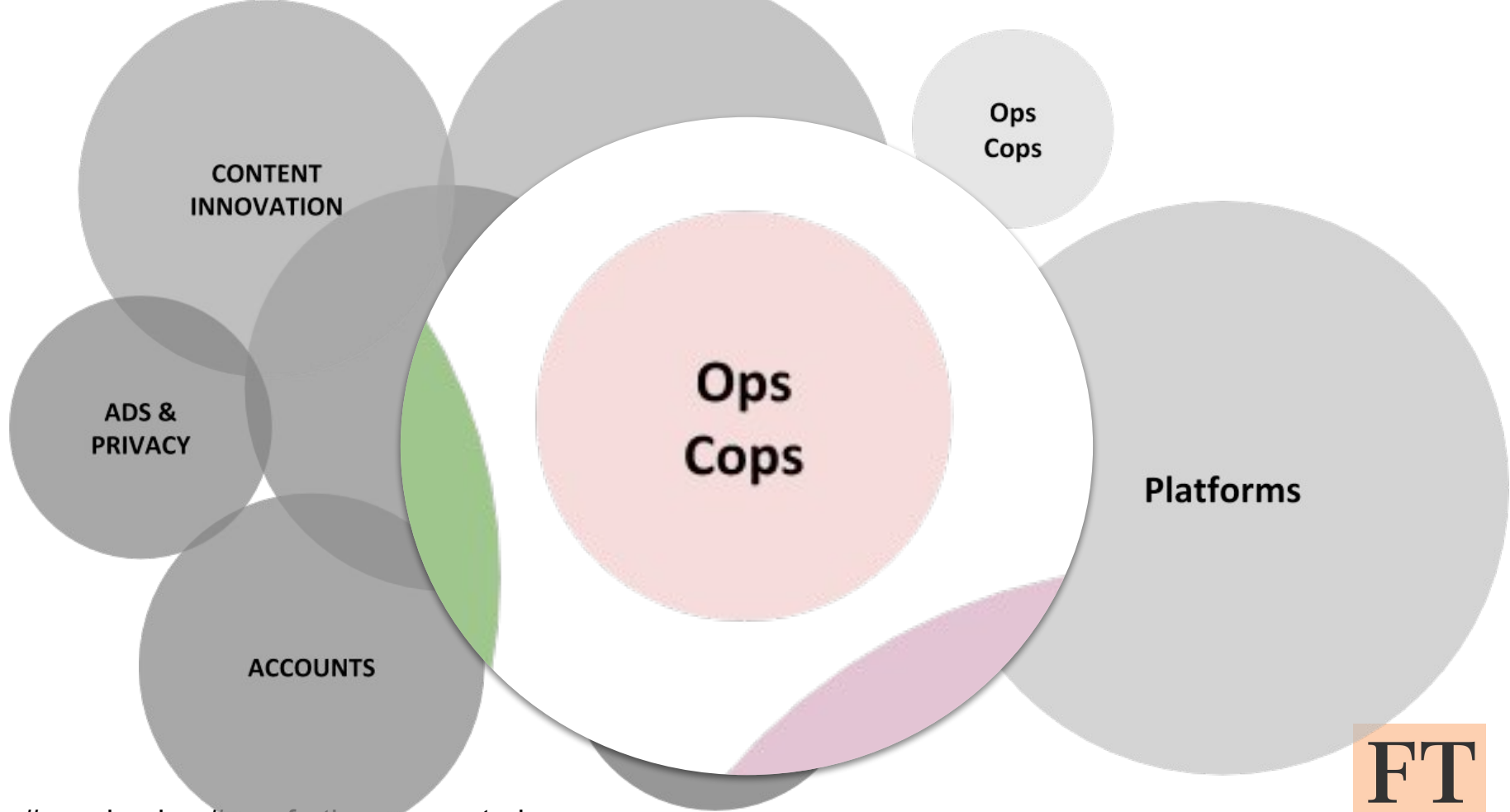
Split into 9 teams

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Operations monitor our
entire estate 24/7

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FT

1999

Choose your PT info



Analysis: The Big Road

BlackRock's black box: the tech hub of modern finance



Tax bows to pressure

U.S. officials will not be
involved in enforcing law for



Blackstone to invest in UK
given \$1.1bn Saudi-backed fund

Slack says he is 100% rebuilding drive that was originally slated to release most of cash.

Analysis: Norges Bank
Investment Management



Our systems are a
drop in the pond

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You build it, you run it

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Supporting our systems out-of-hours


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This is our approach to DevOps

#qconlondon #prepfortheunexpected

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Our engineers wear
many hats

Photo by [Joshua Coleman](#) on [Unsplash](#)

We're putting on our
incident management hat

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How do we do support out-of-hours?

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Our engineers volunteer to
be part of the out-of-hours
team

#qconlondon #prepfortheunexpected

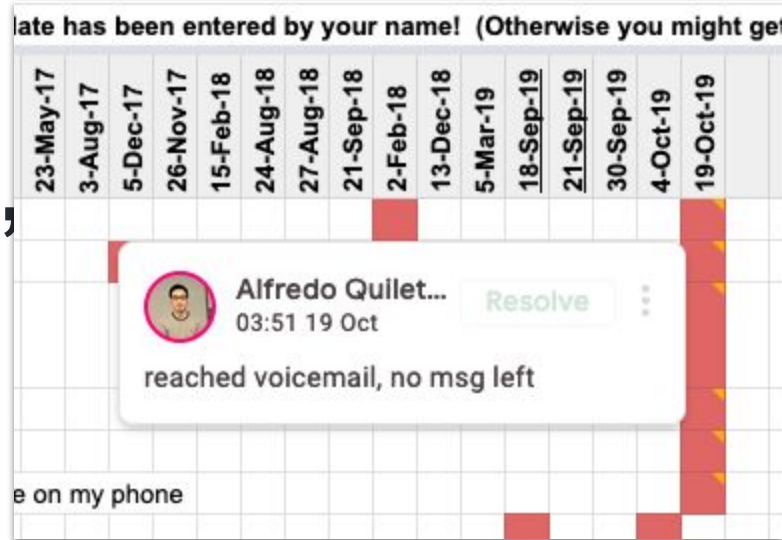
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We don't have shifts

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We don't



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Which means, we could all
be unavailable

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What do we care about?

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We're talking about our business capabilities

#qconlondon #prepfortheunexpected

The logo for the Financial Times (FT), consisting of the letters 'FT' in a white serif font inside an orange square.

We're
business

The screenshot shows a web browser window with the URL <https://heimdall.in.ft.com/capabilities>. The page header includes the FT logo, the name 'Heimdall', and navigation links for 'FAQs', 'Add Monitoring', and 'Report a bug'. The main content area is divided into two sections: 'Tracked capabilities' and 'Untracked capabilities'. The 'Tracked capabilities' section shows '0 unhealthy' and '1 healthy' status, with a visual representation of a sign-in process for 'BusinessCritical' users. The 'Untracked capabilities' section shows '38 untracked'. The footer contains links to 'View project on GitHub', '#monitoring-agg', and a copyright notice for The Financial Times Ltd. 2019.

FT Heimdall | Capabilities

https://heimdall.in.ft.com/capabilities

FAQs Add Monitoring Report a bug

Tracked capabilities 0 unhealthy 1 healthy

Users can sign in

BusinessCritical

Untracked capabilities 38 untracked

View project on GitHub #monitoring-agg

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#qconlondon #prepforn

FT

What is an incident at the FT?

#qconlondon #prepfortheunexpected

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Customer Products has
two really important
business capabilities

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FT

1. Our users can always
read the news

#qconlondon #prepfortheunexpected

FT

2. Journalists must be able to publish the news

#qconlondon #prepfortheunexpected

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If either of these go wrong
we declare an incident

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For help please visit help.ft.com.

We apologise for any inconvenience.

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[More from the FT Group >](#)

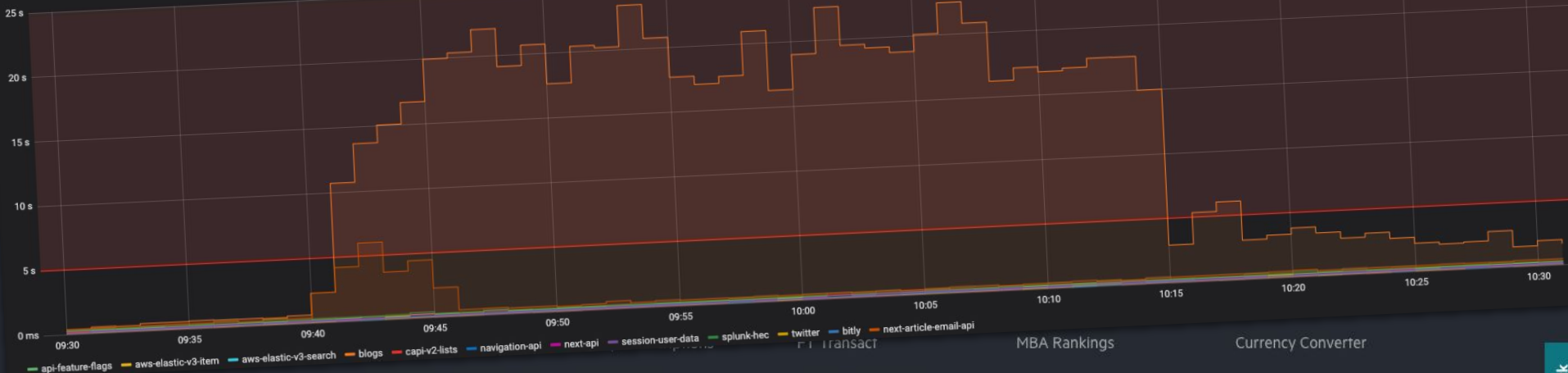
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Sorry

The page you are trying to access is unavailable.

Response times for services fetched by article



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Careers

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Feedback

0. How do we do on-call?
1. Our incident management challenges
2. Making out-of-hours sustainable
3. The results and takeaways

What were our challenges?

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We were not immediately
productive on call →

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The logo for the Financial Times, consisting of the letters 'FT' in a white serif font inside an orange square.

We were not immediately productive on call

We had an
engineering mindset in
an operations situation

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We were not immediately productive on call

Because we don't
have any SRE or
DevOps specialists

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“ I always start with the impact and the comms, they kinda jump in at the Tech. ”

We were not immediately productive on call

Our incident
management process
wasn't second nature

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We had very few incidents
in the first half of the year

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FT

W
in

Issues - Financial-Times/next-bugs

https://github.com/Financial-Times/next-bugs/issues?utf8=✓&q=is%3Aissue+is%3Aopen+created%3A2019-01-01..2019-07-01

Code Issues 62 Pull requests 0 Actions Security Insights Settings

Filters is:issue is:open created:2019-01-01..2019-07-01 Labels 15 Milestones 0 New issue

Clear current search query, filters, and sorts

<input type="checkbox"/>	10 Open	0 Closed	Author	Label	Projects	Milestones	Assignee	Sort	
<input type="checkbox"/>	🔔		The one where myFT daily digests, instant alerts and push notifications stopped sending type-incident-report #236 opened on Jun 4, 2019 by binaryberry						
<input type="checkbox"/>	🔔		The one where live blogs stopped to serve images (When Theresa resigned) type-incident-report #235 opened on May 24, 2019 by umbobabo						
<input type="checkbox"/>	🔔		The one where myFT emails stopped sending type-incident-report 1						
<input type="checkbox"/>	🔔		The second one where myFT went down because GrapheneDB fell over type-incident-report 1						
<input type="checkbox"/>	🔔		The one where Elasticsearch wasn't happy during Brexit system-alpha system-google-amp system-next-article system-next-front-page system-next-search-page type-incident-report 21						
<input type="checkbox"/>	🔔		The one where there was no popularContent system-next-front-page type-incident-report 8						
<input type="checkbox"/>	🔔		The one where the video page was sorry type-incident-report						
<input type="checkbox"/>	🔔		The one where someone reaaally wanted to access US articles system-next-article type-incident-report 12						

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And we were down to 5
people on the out-of-hours
support team

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So we needed to make
out-of-hours team
sustainable

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0. How do we do on-call?

1. Our incident management challenges

2. Making out-of-hours sustainable

3. The results and takeaways

We surveyed engineers
about helping out during
an incident

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There were many people
on the fence

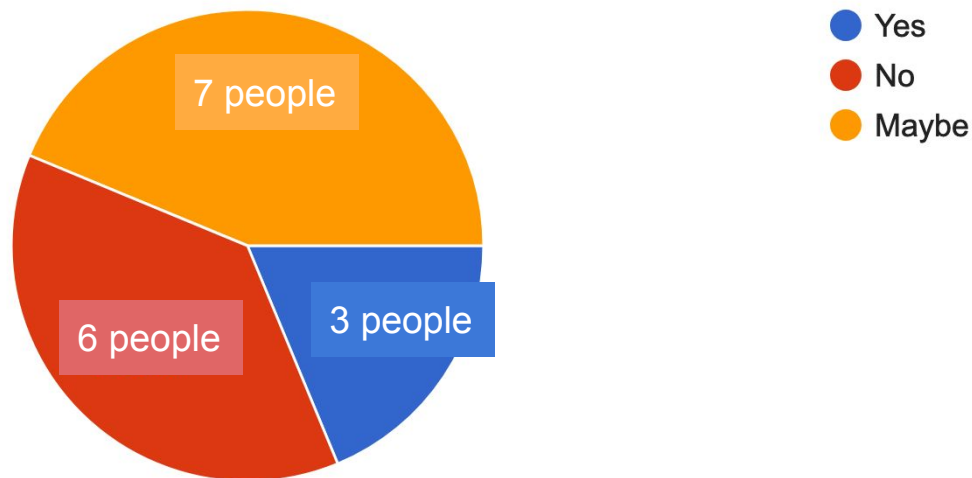
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FT

Th
on

Are you interested in joining the our of hours rota?

16 responses



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And they told us why

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“

I will need much more
confidence in systems
and domains
knowledge.

”

“ If I were to have a better understanding of how it works and what I would need to do, I would very likely join. ”

#qconlondon #prepfortheunexpected

FT

We set out to convince
people to join our
out-of-hours team

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FT

We built and ran incident workshops

#qconlondon #prepfortheunexpected

The logo for the Financial Times (FT), consisting of the letters 'FT' in a white serif font on an orange square background.

So our engineers are
better prepared to
take on incidents

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And we wrote a generic
runbook for our
microservices

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FT

So engineers knew what
they can do, and apply it
to our ~180 systems

We set out in the last 6
months of 2019 to address
the situation

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Building your incident workshop →

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FT



Building your incident workshop

Don't Panic!

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FT



Building your incident workshop

Set aside a couple of
hours to write a
workshop

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Building your incident workshop

Start by having a read
of your old incidents

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FT

Building your incident workshop

Start by...

0

The one where RSS became "popular" again #213



i-like-robots opened this issue on Aug 29, 2018 · 7 comments

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Building your incident workshop

Use the first page to
set the scene

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The FT logo, consisting of the letters 'FT' in a white serif font, is positioned inside an orange square in the bottom right corner of the slide.

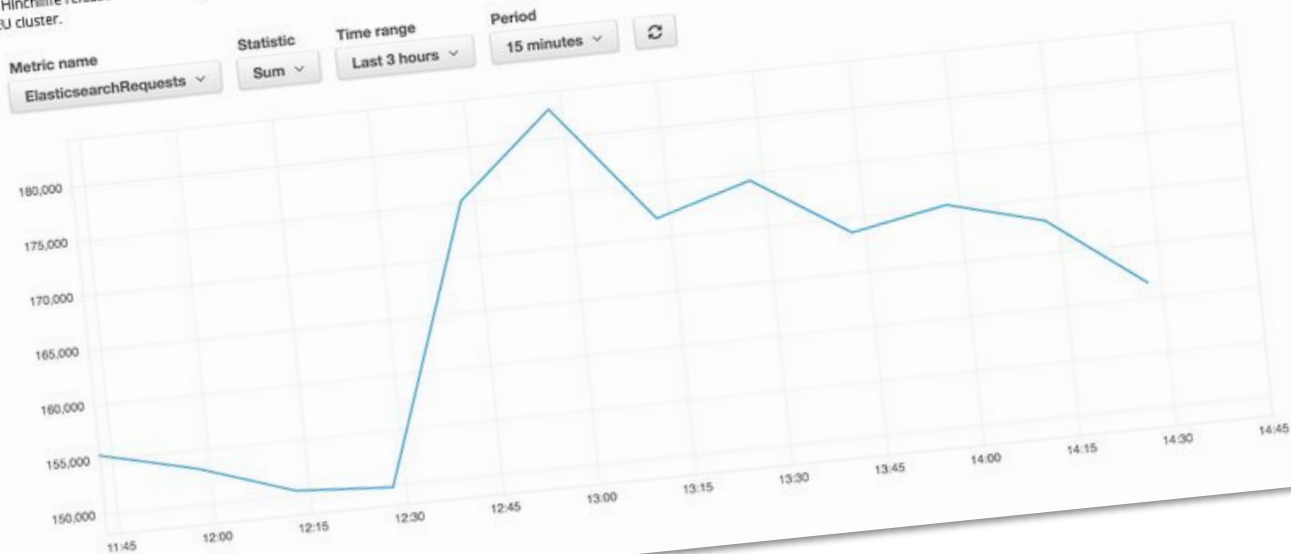
Building

It's 12:45pm (phew!) and some health checks start going off in Slack...

The stream page looks to be having some issues...



Matt Hinchliffe released some changes to Elasticsearch in the morning. And while looking in AWS at the Cloudwatch Metrics for our Elasticsearch clusters you see the following on the graph of requests to the EU cluster.



#qconlondon

FT



Building your incident workshop

Follow it with several
pages of graphs and
information

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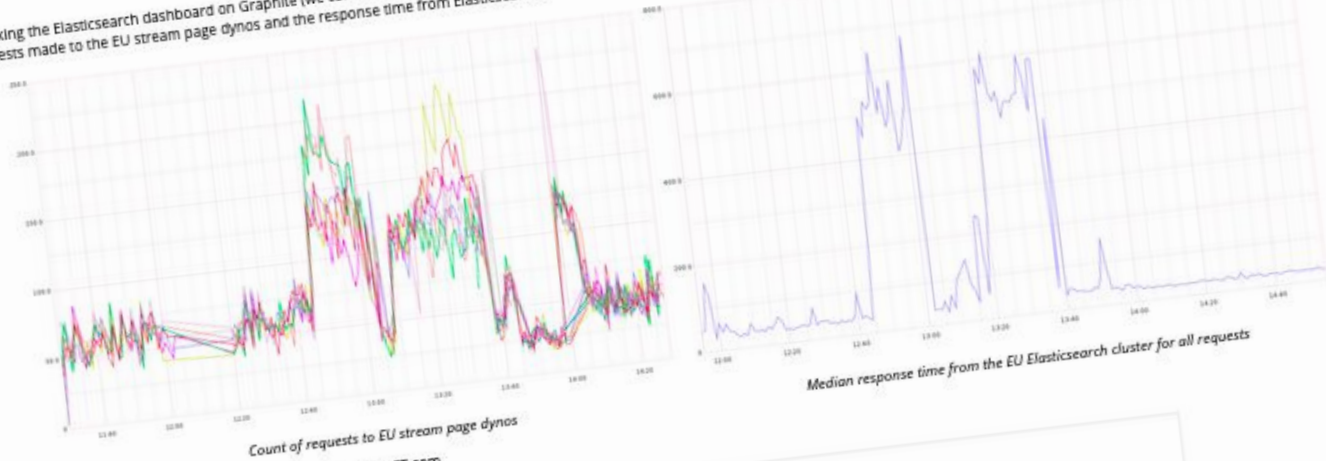
FT

Build:

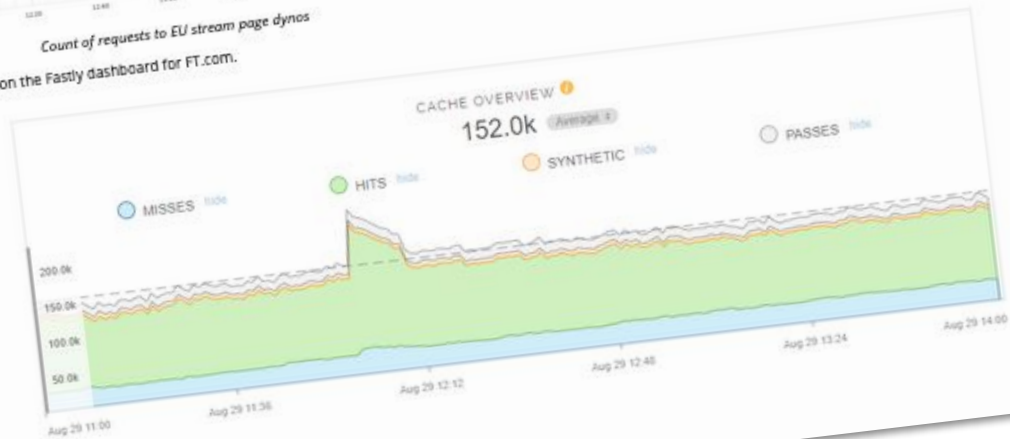
For
pa
inf

#qconlondo

Checking the Elasticsearch dashboard on Graphite (we could also have used our Grafana dashboard at <http://grafana.ft.com/d/000000173/ft-com-elasticsearch>) this is what we see for the number of requests made to the EU stream page dynos and the response time from Elasticsearch.



And here's what it looks like on the Fastly dashboard for FT.com.



FT



Building your incident workshop

Each page progresses
the incident

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FT

Building your incident

At 13:10 Dawn Budge noticed that the logs in Splunk were primarily for requests to pages using a ?format=rss query string.

New Search

Index=cdn_prod host=133g50GAc09Hv4v8t0dMry | stats count by waf_message,url,true_client_ip | sort - count

Finalizing job... No Event Sampling

Events (589,826)

Patterns

Statistics (10,000)

Visualization

100 Per Page Format Preview

waf_message	url	true_client_ip	count
Request Missing an Accept Header	/?edition=uk&format=rss	41.1.1.1	7215
Request Missing an Accept Header	/world?format=rss	77.26.16.154	6567
Request Missing an Accept Header	/fast?format=rss	41.1.1.1	5834
Request Missing an Accept Header	/companies/oil-gas?format=rss	41.1.1.1	4638
Request Missing an Accept Header	/companies/uk?format=rss	47.2.2.114.93	4621
Request Missing an Accept Header	/mergers-acquisitions?format=rss	41.1.1.1	4557
Request Missing an Accept Header	/uk-equities?format=rss	41.1.1.1	4528
Request Missing an Accept Header	/stream/brandId/NTthxurlyMxMhZjRjZjQ0Y2U1LTg0O0UZWVjNmEyYmU1NzQ2-QnJhbnRz?format=rss	41.1.1.1	3646
Request Missing an Accept Header	/markets/uk?format=rss	41.1.1.1	3639
Request Missing an Accept Header	/in-depth/m-and-a?format=rss	41.1.1.1	3612
Request Missing an Accept Header	/markets/uk?format=rss	22.22.22.22	3573
Request Missing an Accept Header	/in-depth/m-and-a?format=rss	1.1.1.1	3501
Request Missing an Accept Header	/?edition=international&format=rss	26.1.1.1	3031
Request Missing an Accept Header	/world/uk?format=rss	41.1.1.1	2829
Request Missing an Accept Header	/?edition=international&format=rss	41.1.1.1	
Missing User-Agent Header	/ft.newstips/index.html		
Found User-Agent associated with scripting/generic HTTP client			

#qconl... proportion unexpected

FT



Building your incident workshop

And is an opportunity
to ask questions about
tools and systems

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Building your incident workshop

Include the dead ends
you encountered in
production

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Building your incident workshop

We also got wind of some push notifications and emails that went out this morning.

Push notifications

06:35:38 daily-briefing

07:22:05 breaking-news UK-global-breaking-news

07:22:05 breaking-news NOT-UK-global-breaking-news

Emails

04:30 myFT email send, next-api apparently failed with timeouts so none of the emails actually sent

06:20 FirstFT "Brexit pain persists, Cardinal Pell sentenced, the ECB after Mario Draghi"

07:18 Breaking News "UK outlines tariff plan to limit damage of a no-deal Brexit"

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Building your incident workshop

Then wrap it up in a
summary page

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Building your incident

What was it?

We received a high volume of requests, about 50% of which were for RSS feeds, in 3 bursts lasting approximately 90 minutes.

Many of these missed the CDN cache and hit the application. This increased the number of requests to our EU Elasticsearch cluster which began to timeout due to the large volume of data requested each time by the stream page.



The impact on FT.com

In particular one IP address belonging to a Virgin Media customer was identified and added to the CDN blacklist. An abuse complaint was also filed with Virgin Media.

Several other IP addresses belonging to FactSet and Wall Street on Demand were also identified as making a very high number of requests to our RSS feeds.

We ruled out the following theories of what happened:

1. A recent change to the stream page app, nothing has changed recently so not this
2. Lots of purged content so more misses, wasn't a correct theory as there was a big spike in requests, most of which were hits, with a small increase in misses
3. Scrape or DDOS, we shut down some IPs that made lots of requests but still had problems
4. Something is making stream page run slow, no obvious releases that might have done that. However the app needs more than 12 dynos to deal with something like 20 requests a second. Digging into the code locally, each stream page makes a lot of requests to next-api, the world and UK streams make about 10, a more standard list-only stream makes about 6

Arjun made changes to the stream page so it no longer made calls to next-api, and we moved some of our social media pollers to a different RSS system.



Building your incident workshop

What actually happened?

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Building your incident workshop

What did we do?

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Building your incident workshop

What caused the incident?

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Building your incident workshop

Keep it minimal

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Building your incident workshop

The open format
encourages people to
share what they know

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And we also look at the Grafana dashboard for our Elastic...

Now we've woken up

It's 9am and we're in the office...

Because there are so many systems having trouble, we think it is maybe something to do with Elasticsearch, and have a look at our clusters charts in AWS.

Search latency (SearchLatency)

Create a CloudWatch dashboard with the instances selected below.

Create CloudWatch dashboard

Period

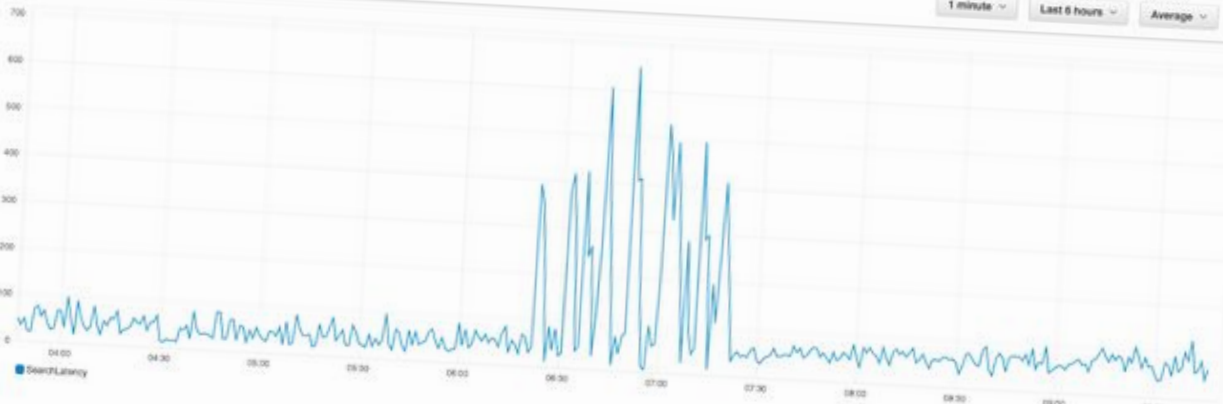
1 minute

Time range

Last 6 hours


Statistic

Average



This is the EU graph, the US one looks much the same. Historically search latency is very flat, sitting below 100ms.

Mar 13 09:59



Running your incident workshop →

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Running your incident workshop

You are the incident lead*

* aka the facilitator

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Running your incident workshop

Split people into small teams

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Running your incident workshop

Introduce the session and the format

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Running your incident workshop

Hand out that first
page of background
information

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Running your incident workshop

Give teams ~10
minutes to discuss this
information



Running your incident workshop

Encourage the
discussion, pose
questions

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Running your incident workshop

Remind people to
write their thoughts
down!

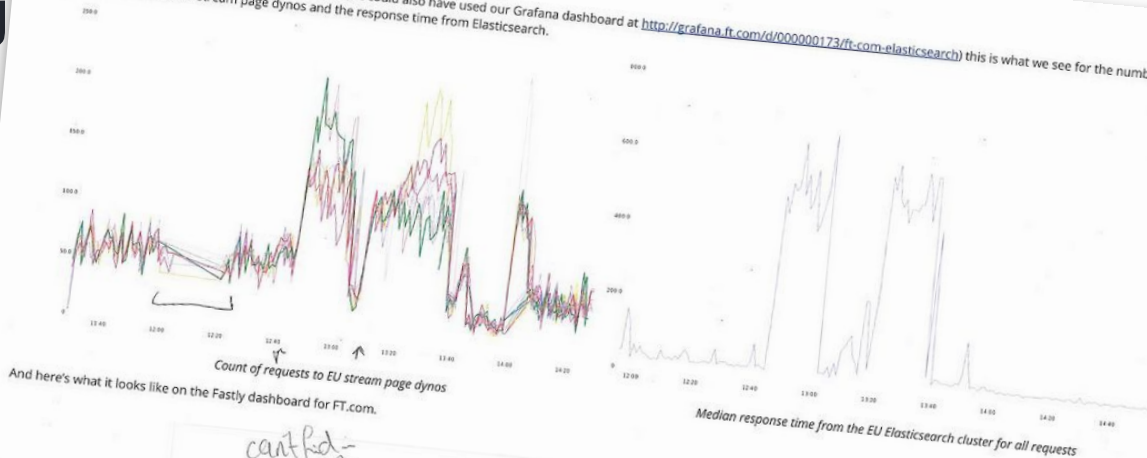
#qconlondon #prepfortheunexpected

The FT logo, consisting of the letters 'FT' in a white serif font, is positioned inside an orange square.

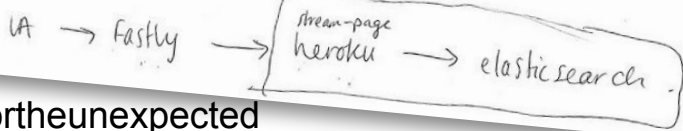
Running

Re
writ
dow

Checking the Elasticsearch dashboard on Graphite (we could also have used our Grafana dashboard at <http://grafana.ft.com/d/000000173/ft-com-elasticsearch>) this is what we see for the number of requests made to the EU stream page dynos and the response time from Elasticsearch.



And here's what it looks like on the Fastly dashboard for FT.com.



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Running your incident workshop

Bring the teams
together and ask them
the following...

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Running your incident workshop

We're addressing that
engineering mindset

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Running your incident workshop

1. What actions, if any,
can you take right
now?



Running your incident workshop

2. What more information do you need?

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Running your incident workshop

3. What are you communicating?

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Running your incident workshop

People get really
excited, so moderate
the conversation!

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Running your incident workshop

Then, hand out more
information.

Hopefully it's what they've asked for...

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Running your incident workshop

Repeat the handouts
and questions until the
incident is “over”



Running your incident workshop

Leave plenty of time
for questions

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Documenting a generic microservices runbook →


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FT

Documenting a generic microservices runbook

One place for generic
actions you can take
during an incident

Documenting a generic microservices runbook

We call it the FT.com
incident tool belt 

#qconlondon #prepfortheunexpected

FT

The FT.com Incident Tool Belt

bren edited this page on Sep 10, 2019 · 22 revisions

[Edit](#)[New Page](#)

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1. [Being an Incident Lead](#)
2. [Failing over FT.com](#)
3. [Scaling a Heroku app](#)
4. [Blocking an IP address](#)
5. [Reverting a change](#)
6. [Turning a flag on or off](#)

Being an Incident Lead

Use the `/incident` Slack slash command to start a new incident.

Your responsibilities are to...

Overview

- 🏠 [Home](#)
- 📖 [Principles](#)
- 🐛 [Bugs](#)
- ? [FAQs](#)
- 👥 [Teams](#)
- [Tech Strategy](#)

Documenting a generic microservices runbook

Each action has prep,
usage and previous
incidents documented

Documenting a generic microservices
runbook

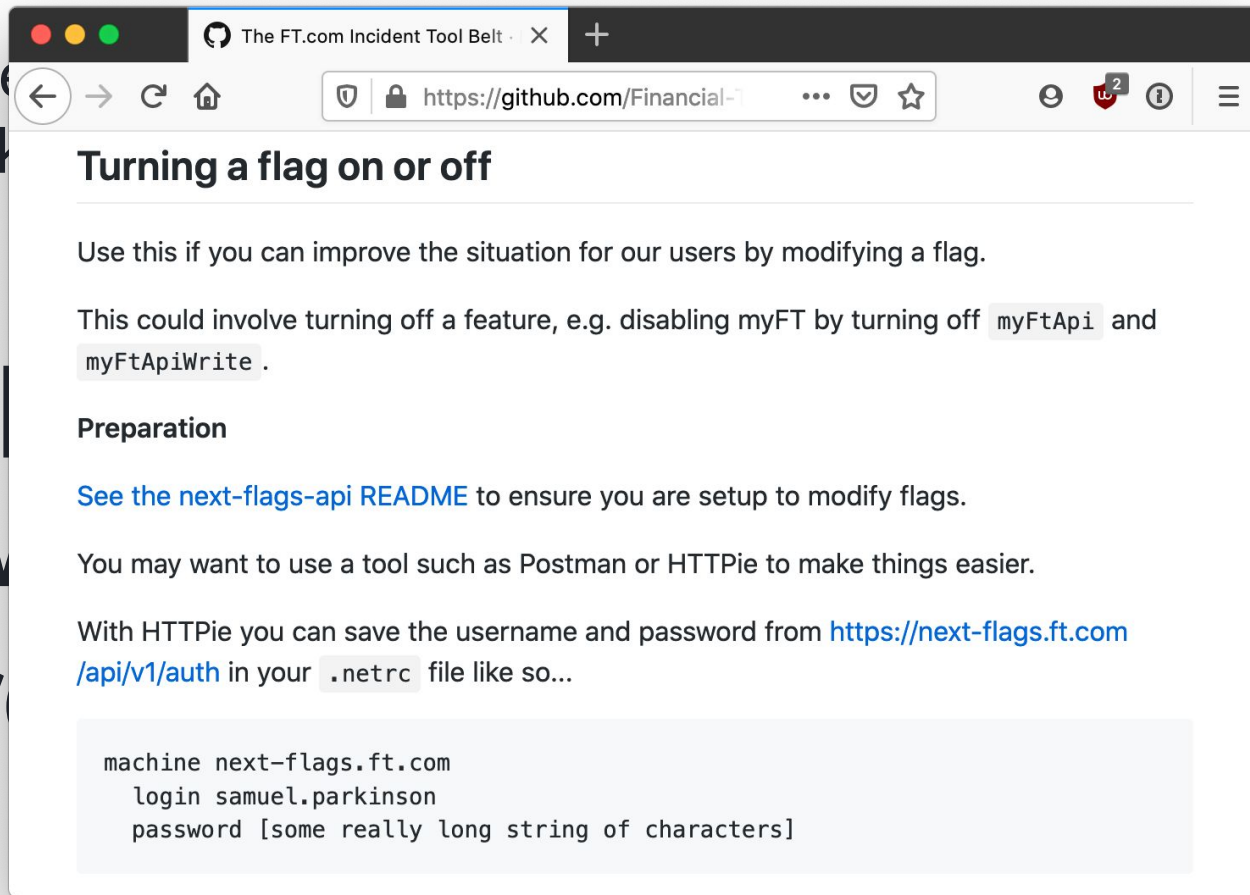
Preparation, such as downloading the Heroku CLI

#qconlondon #prepfortheunexpected

FT

Document
runbook

Prep
down
Here



The screenshot shows a web browser window with a dark theme. The address bar displays the URL `https://github.com/Financial-...`. The page title is "The FT.com Incident Tool Belt". The main content area has a heading "Turning a flag on or off" and a subheading "Preparation". The text explains how to modify flags to improve the user situation, specifically mentioning disabling myFT by turning off `myFtApi` and `myFtApiWrite`. It also provides instructions on how to use Postman or HTTPie to make things easier, and how to save the username and password from `https://next-flags.ft.com/api/v1/auth` in the `.netrc` file. A code block at the bottom shows the contents of the `.netrc` file.

Turning a flag on or off

Use this if you can improve the situation for our users by modifying a flag.

This could involve turning off a feature, e.g. disabling myFT by turning off `myFtApi` and `myFtApiWrite` .

Preparation

[See the next-flags-api README](#) to ensure you are setup to modify flags.

You may want to use a tool such as Postman or HTTPie to make things easier.

With HTTPie you can save the username and password from <https://next-flags.ft.com/api/v1/auth> in your `.netrc` file like so...

```
machine next-flags.ft.com
  login samuel.parkinson
  password [some really long string of characters]
```

#qconlondon #prepfortheunexpected

FT

Documenting a generic microservices runbook

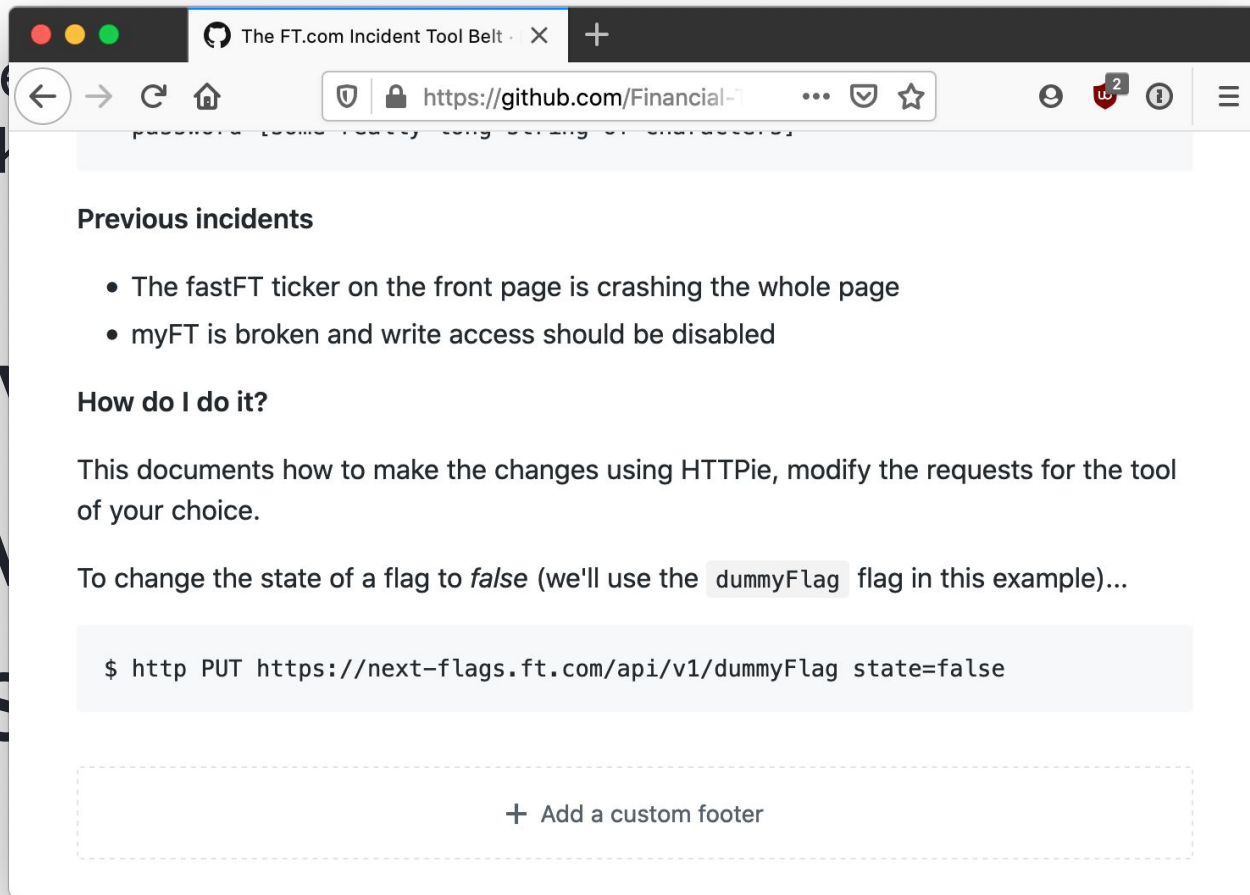
Previous incidents
provide context for
those yet to happen

#qconlondon #prepfortheunexpected

FT

Document
runbook

Pre
prov
thos



The screenshot shows a web browser window with the address bar displaying `https://github.com/Financial-...`. The page content includes a section titled "Previous incidents" with a bulleted list of two items: "The fastFT ticker on the front page is crashing the whole page" and "myFT is broken and write access should be disabled". Below this is a section titled "How do I do it?" followed by a paragraph explaining that the document describes how to make changes using HTTPie. It then states, "To change the state of a flag to *false* (we'll use the `dummyFlag` flag in this example)..." and provides a terminal command: `$ http PUT https://next-flags.ft.com/api/v1/dummyFlag state=false`. At the bottom, there is a dashed box containing the text "+ Add a custom footer".

The FT.com Incident Tool Belt

Previous incidents

- The fastFT ticker on the front page is crashing the whole page
- myFT is broken and write access should be disabled

How do I do it?

This documents how to make the changes using HTTPie, modify the requests for the tool of your choice.


To change the state of a flag to *false* (we'll use the `dummyFlag` flag in this example)...

```
$ http PUT https://next-flags.ft.com/api/v1/dummyFlag state=false
```

+ Add a custom footer

#qconlondon #prepfortheunexpected

FT



Documenting a generic microservices
runbook

We ran training
sessions on each
action

#qconlondon #prepfortheunexpected



FT

Documenting a generic microservices runbook

They were hands on
and we ran them in
production

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FT

0. How do we do on-call?
1. Our incident management challenges
2. Making out-of-hours sustainable
- 3. The results and takeaways**

Did the workshops and documentation help?

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The logo for the Financial Times (FT), consisting of the letters 'F' and 'T' in a serif font, set against an orange square background.

6 incident workshops with 3 “incidents”

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The logo for the Financial Times (FT), consisting of the letters 'F' and 'T' in a serif font, set against an orange square background.

6 tool box workshops

#qconlondon #prepfortheunexpected

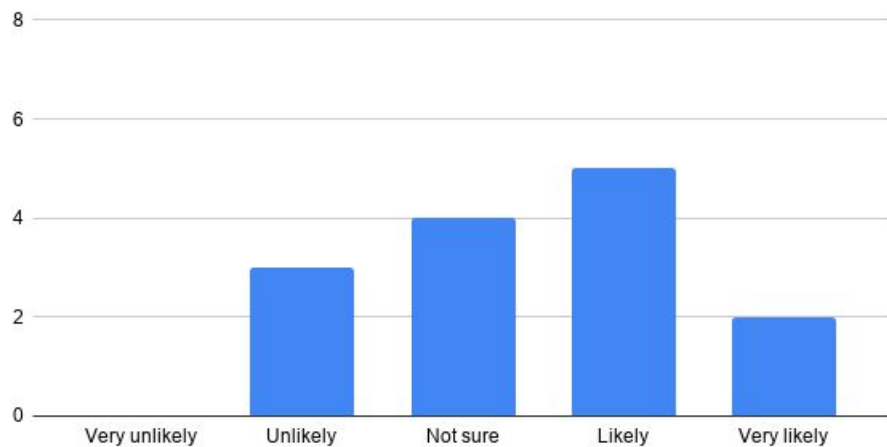
The logo for the Financial Times (FT), consisting of the letters 'FT' in a black serif font, centered within an orange square.

How likely are you to help out during an incident?

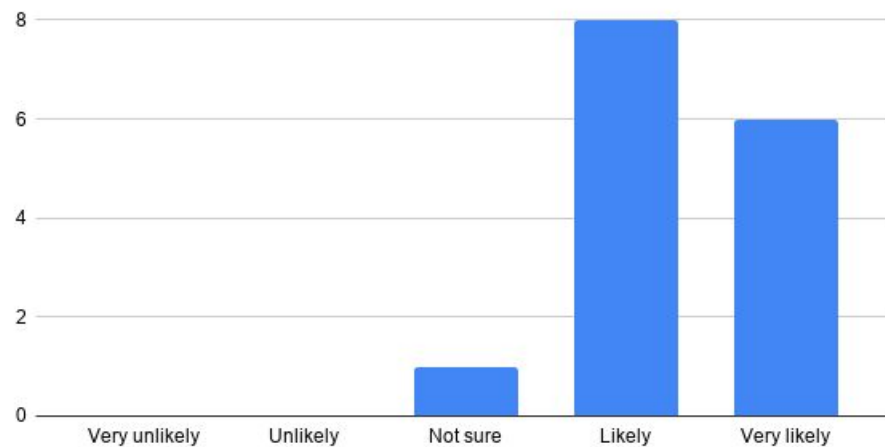
#qconlondon #prepfortheunexpected

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How likely are you to help out during an incident? (Pre-workshop)



How likely are you to help out during an incident? (Post-workshop)



#qconlondon #prepfortheunexpected

FT

“ Solving OOH incidents
is probably not as
scary as most of us
think. ”

The workshops expanded
everyone's mental model
of our systems

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FT

next-front-page/init-server.js

https://github.com/Financial-Times/next-front-page/blob/master/server/init-server.js

Search or jump to... Pull requests Issues Marketplace Explore

Financial-Times / next-front-page Private Watch 27 Star 0 Fork 1

< Code Issues 21 Pull requests 6 Actions Security Insights Settings

Branch: master next-front-page / server / init-server.js Find file Copy path

Jenniferemshepherd Revert "Merge pull request #2263 from Financial-Times/revert-page-kit... 20998fb 14 days ago

6 contributors

134 lines (118 sloc) 3.99 KB Raw Blame History

```
1 const path = require('path');
2 const express = require('@financial-times/n-express');
3 const nHealth = require('n-health');
4 const additionalHealthChecks = require('./libs/health-checks');
5 const TopStories = require('./data/sources/topstories.datasource');
6 const FastFT = require('./data/sources/fastft.datasource');
7 const RegionalNews = require('./data/sources/regionalnews.datasource');
8 const OtherHomepage = require('./data/sources/otherhomepage.datasource');
9 const SpecialEvent = require('./data/sources/specialevent.datasource');
10 const Podcasts = require('./data/sources/podcasts.datasource');
11 const streamToFeed = require('./libs/stream-to-feed');
12
13 const topStoriesValidator = require('./data/validation/top-stories-validator');
14 const navigationMiddleware = require('@financial-times/dotcom-middleware-navigation');
15 const assetLoaderMiddleware = require('@financial-times/dotcom-middleware-asset-loader');
16 const appContextMiddleware = require('@financial-times/dotcom-middleware-app-context');
17
18 const healthChecks = nHealth({
19   path.resolve(__dirname, './config/health-checks'),
20   additionalHealthChecks
21 });
```

#qcommonden #preprotheunexpected

FT

splunk



Grafana

aws



HEROKU

fastly

#qcom #nand #proprietary #unexpected

We got better at the process

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“ [I’ve learnt] to focus initially on comms and customer experience, and less on finding the technical root cause. ”

We started learning from our old incidents

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Photo by [Aleksandar Cvetanovic](#) on [Unsplash](#)

“ I am keen to work
towards being on the
out-of-hours team. ”

#qconlondon #prepfortheunexpected

FT

Engineers did join the
out-of-hours team 🎉

#qconlondon #prepfortheunexpected

FT

There's now 11 of us

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Many of whom were
dialed into the
big DNS incident

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What are we doing this year?

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Continue to promote
joining the out-of-hours
team

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Evangelise running incident workshops across the company

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PETER'S FISH FACTORY

Key takeaways

FRESH
CORNISH
SKATE
WITH
CHIPS
£8.00

SPECIAL
HADDOCK
FILLET
CHIPS
ONLY
£4.90

KIDS
SAUSAGE 2.10
SAVELOY 2.90
FISHCAKE 2.90
SMALL COD 2.90
ALL WITH
CHIPS

Photo by [Ollie Jordan](#) on [Unsplash](#)

Practicing incident
management can prepare
you for the unexpected

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Confidence doesn't have
to come from in-depth
knowledge

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Take this back to your
teams, and have fun!

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We're hiring!



<https://www.ft.com/qcon>

#qconlondon #prepfortheunexpected

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Further reading

- [Coping with Complexity](#) by the SNAFUcatchers
- [Beyond the "Fix-it" Treadmill](#) by J. Paul Reed
- [Cognitive Work of Hypothesis Exploration During Anomaly Response](#) by Marisa R. Grayson
- [Learning from Incidents in Software Blog](#)

Incident workshop examples

- [FT.com Incident Workshop #1](#)
- [FT.com Incident Workshop #2](#)
- [FT.com Incident Workshop #3](#)

Thank you!

I'd love to hear your thoughts,
suggestions and feedback!

samuel.parkinson@ft.com

#qconlondon #prepfortheunexpected

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