

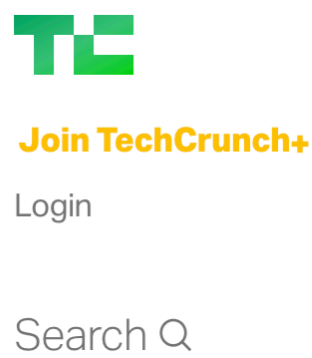
Assessing the GDPR's Effectiveness in Preventing Privacy Infringements from Cross-Border Data Transfers

Alexander Gamero-Garrido, Kicho Yu*, Sumukh Vasisht Shankar, Sindhya Balasubramanian, Alexander Wilcox, David Choffnes

Northeastern University

*University of Southern California

Motivation



As its data flows woees grow, Google lobbies for quickie fix to EU-US transfers

Natasha Lomas @riptari / 1:14 PM EST • January 19, 2022

The biggest GDPR fines of 2020, 2021, and 2022 (so far)

amazon

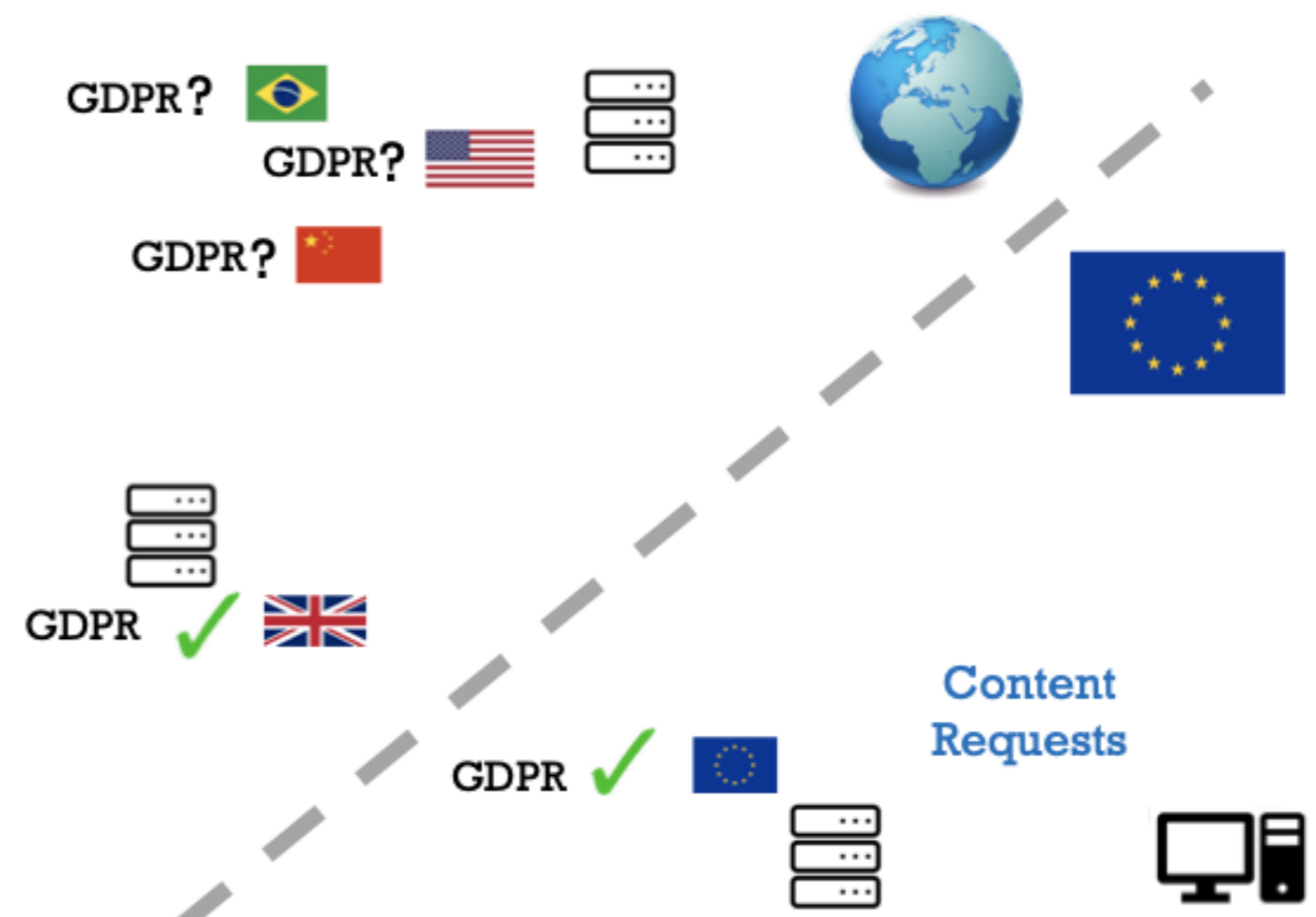
1. Amazon — €746 million (\$877 million)

Amazon's gigantic GDPR fine, announced in the company's July 2021 earnings report, is nearly 15 times bigger than the previous record. The full reasons behind the fine haven't yet been confirmed.



Are Internet Routes Localized within EU in GDPR Compliance?

Content Providers



Challenges and Current Approach

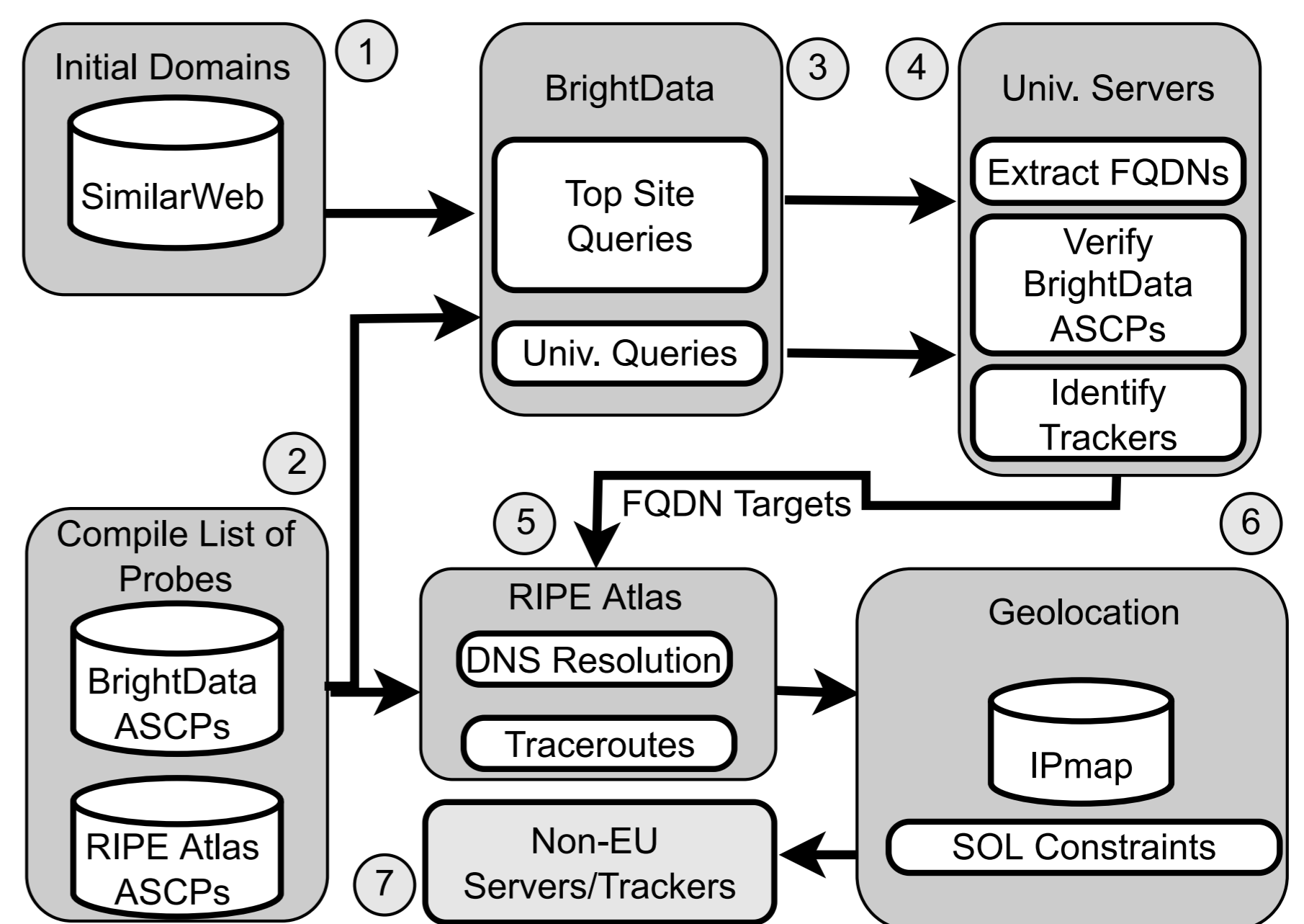
- **Need to know:**
 - **URLs (domains)** that serve content
 - **IP-level routes** to reach content sources
 - **Physical location** of responding server (and intermediate routers?)

bright data

BrightData (a.k.a. Luminati)	HTTP Fetching (get URLs) ✓ IP-Level Measurement ⚠
RIPE Atlas	HTTP Fetching ⚠ Allows IP-Level Measurement
Geolocation Techniques	Accuracy is hotly contested, especially for infrastructure IP addresses Limit to "High Confidence" findings (multiple sources confirm physical location)

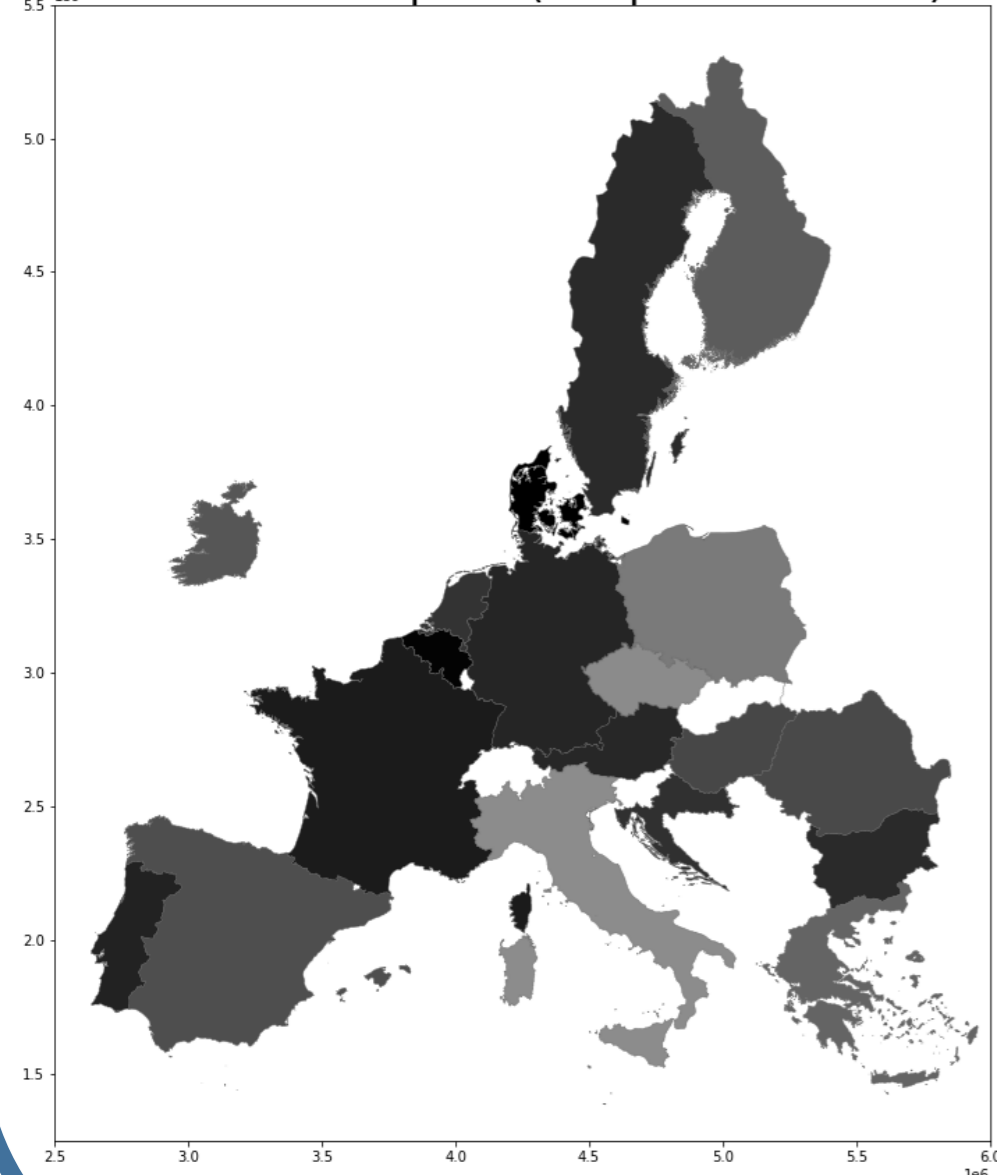
High confidence:
speed of light constraints

Methodology



Servers in Non-Adequate Countries

Perc. Non-Adequate (Unique Tracker IPs)



Source Country	Unique		
	IPs	Tracker IPs	Traceroutes
AT	2.0	1.5	0.7
BE	0.1	0.3	0.1
BG	1.4	1.6	0.2
CZ	3.7	5.1	0.4
DE	2.1	1.5	0.6
DK	0.2	0.1	0.1
ES	2.6	2.9	0.5
FI	4.5	3.4	4.7
FR	1.4	1.1	0.4
GR	4.6	3.7	1.5
HR	1.8	1.8	0.9
HU	2.3	2.6	0.5
IE	1.4	3.2	0.9
IT	3.9	5.1	0.8
NL	1.3	1.9	0.2
PL	4.6	4.4	0.8
PT	1.2	1.3	0.4
RO	3.1	2.7	6.6
SE	1.4	1.6	0.3
SK	4.5	9.1	0.9

Source-Destination Pairs

	AT	BE	BG	CZ	DE	DK	ES	FI	FR	GR	HR	HU	IE	IT	NL	PL	PT	RO	SE	SK
US	47		9	17	43		62	4	12	18	29	14	34	54	16	85	5	4	19	52
TR			1			1					2			11	2			311	11	
RU	1		2			2	3	163		2									7	
MX				1			1							2		35				
IN	4			1	1		2	1		4	1		4	5	1	4	2	1		2
TH	6			1			14		1		1	1	1	1	1	2				1
SG	2			2	1		1		1	6					7	1				
HK					1	5		1		7	1	1	1	1			1	1		
BR		2	2	2			1		1				5	1			2			1
NG			3	4								2		3						1
AE	1		1	4			1		1				3	3						
AU				1	2		1						1							
MY							1						4							
MH									4											
TW					2															1
CO									1						1					
IR																				
CN														1						
EG										1										
GT					1															
IQ																				1
OM						1														
UA						1														
ZA						1														



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