OUR MISSION

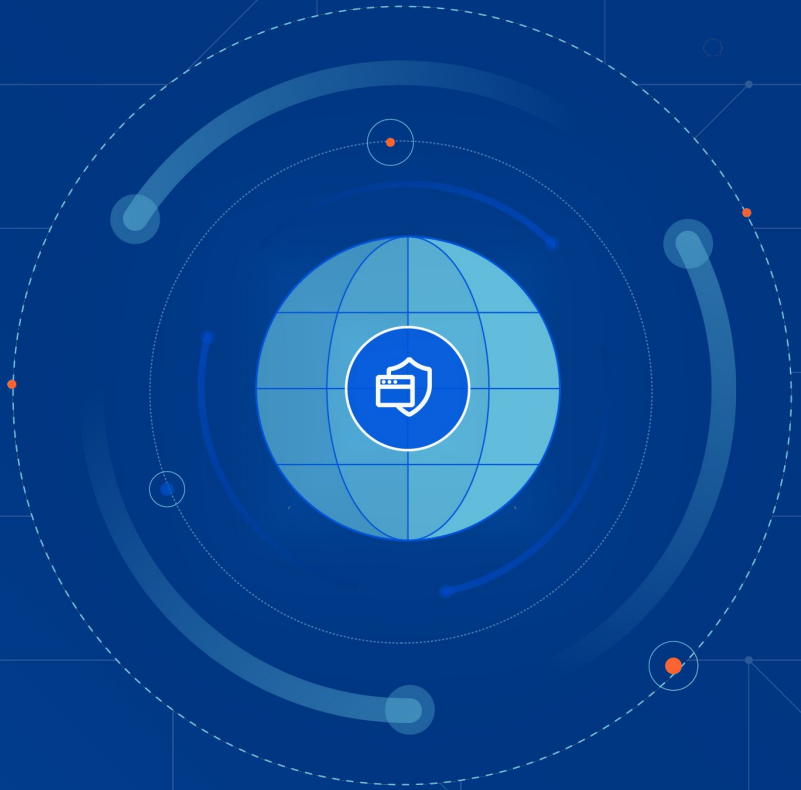
We are helping build a better Internet.

CLOUDFLARE

CLOUDFLARE

Cloudflare on Tour

Houten – 8 Februari 2023



WIE ZIJN WIJ?

Jan van Leuken
Enterprise Account Manager
06-15835064
jvanleuken@cloudflare.com

Michiel Appelman
Sr. Solutions Engineer – Cloudflare
michiel.cloud/flare

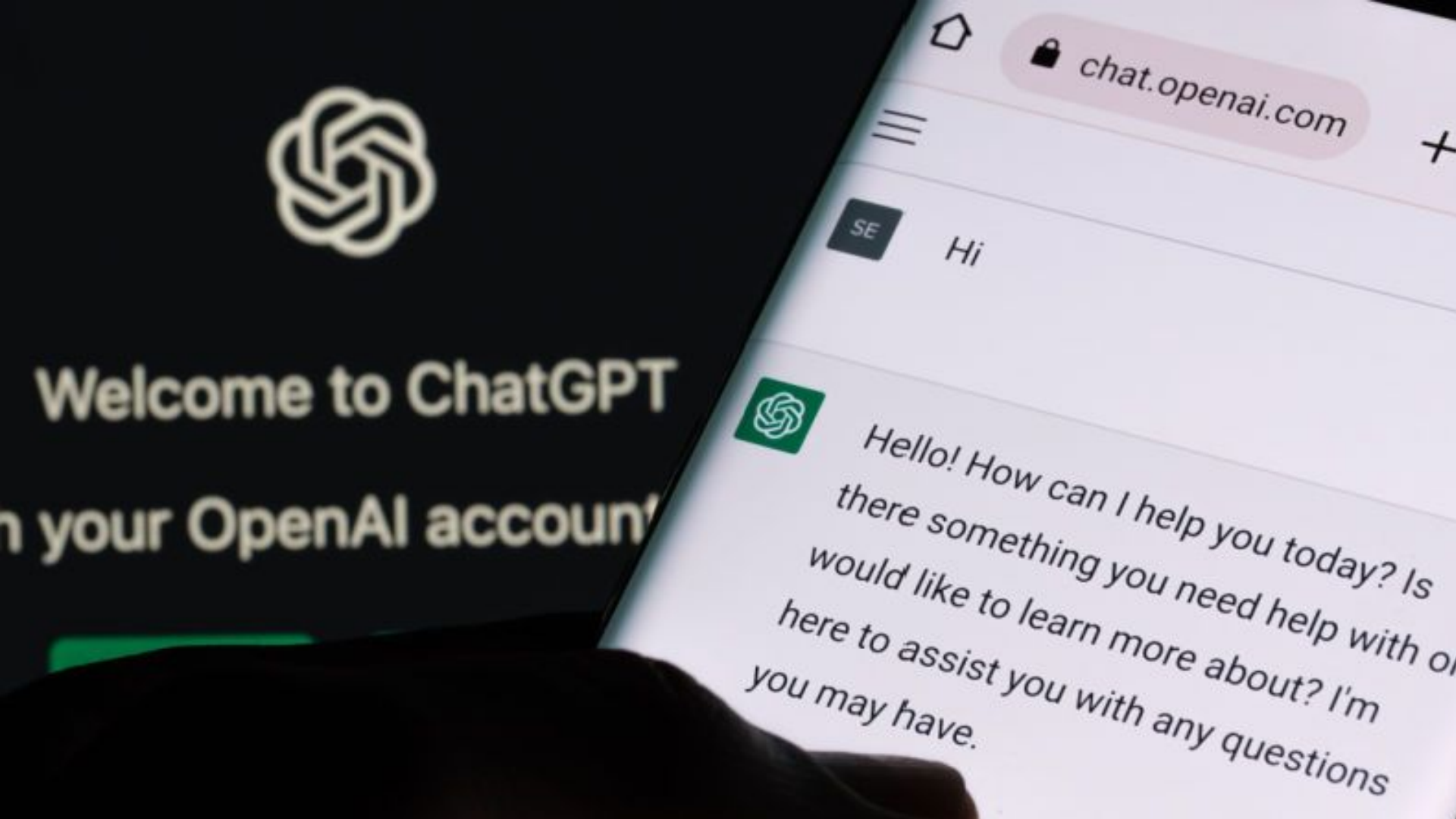
CLOUDFLARE

AGENDA

CLOUDFLARE

1. Introduction
2. Trends (Jan)
3. Cloudflare Intro (Jan)
4. Zero Trust Deep-dive (Michiel)
5. Lunch 12:00 - 13:00 - all in restaurant.

Trends


Welcome to ChatGPT
chat.openai.com
SE
Hi
Hello! How can I help you today? Is
there something you need help with
would like to learn more about? I'm
here to assist you with any questions
you may have.

chat.openai.com

Checking if the site connection is secure

Verify you are human CLOUDFLARE

Privacy • Terms

[redacted]

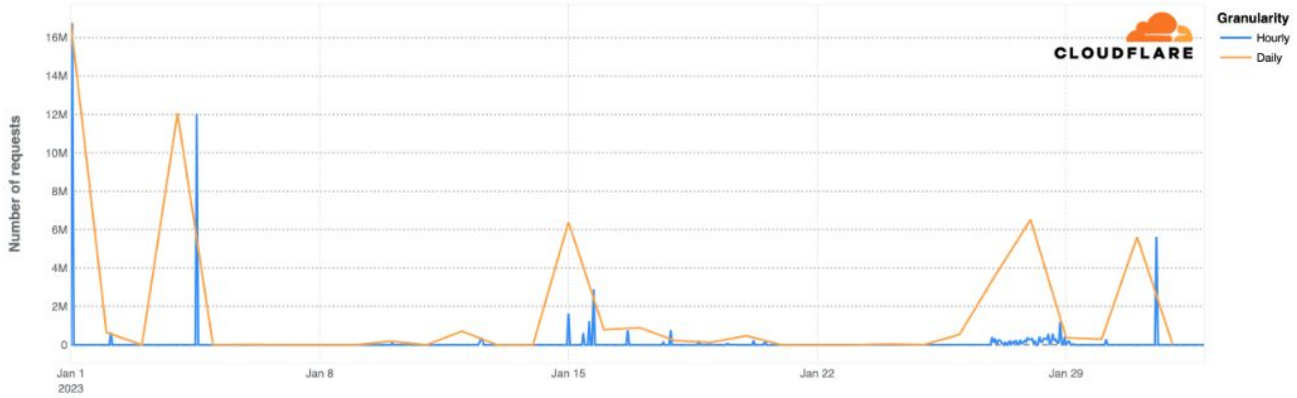
17 20,6K 12:48

Forwarded messages

> **KillMilk** 28/01/23
> Мед учереждения Нидерланды :
> http://www.umcutrecht.nl/ -- Университетский медицинский центр Утрехта
> https://www.lumc.nl/ -- Университетский медицинский центр Лейда
> http://www.radboudumc.nl/ -- Медицинский центр университета Радбуда
> https://www.mumc.nl/ -- Медицинский центр Маастрихтского университета
> https://www.erasmusmc.nl/en/ -- Медицинский центр Университета Эразмус
> https://www.catharinaziekenhuis.nl/ -- Катарина Зикенхейс
> https://www.jeroenboschziekenhuis.nl/ -- Больница Йеруна Боша
> https://www.mmc.nl/ -- Медицинский центр Максима
> https://www.mst.nl/ -- Medisch Spectrum Twente (MST)
> https://reinierdegraaf.nl/

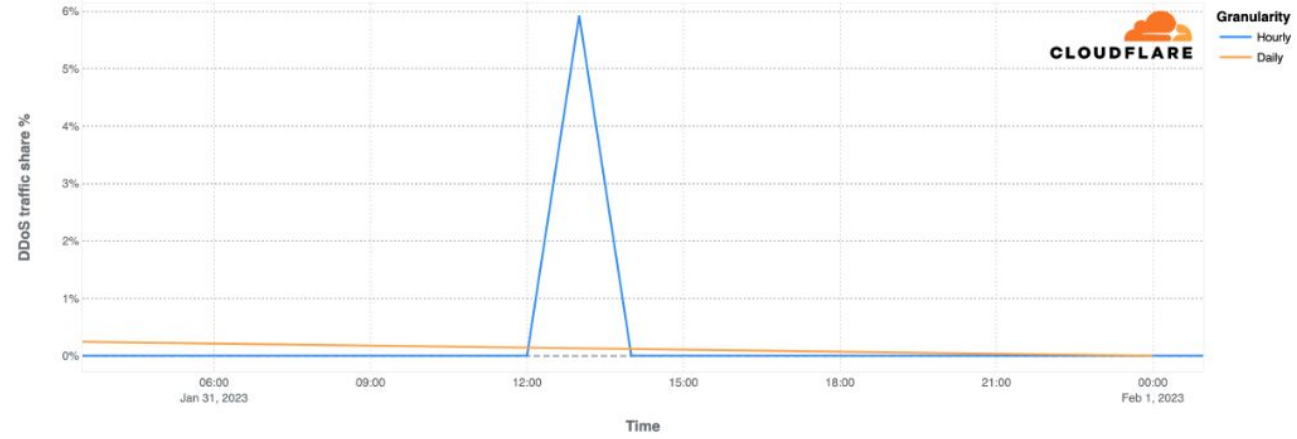
DDoS traffic to Health related industries over time

2023-01-01 00:00:00 - 2023-02-01 21:00:00



DDoS traffic shares to Health related industries over time

2023-01-01 00:00:00 - 2023-02-01 21:00:00



Cloudflare Intro

CLOUDFLARE

Cloudflare is the only composable, Internet-native platform that delivers local capabilities with global scale and with...

- **Security**
- **Privacy**
- **Performance**
- **Resilience**
- **Agility**

275+
cities in 100+ countries, including mainland China

30
Data centers in China

11,000+
networks directly connect to Cloudflare, including ISPs, cloud providers & large enterprises

172Tbps
of network edge capacity and growing

CLOUDFLARE

To provide a private, secure, reliable, performant, agile enterprise-grade Internet experience, Cloudflare is everywhere

126B

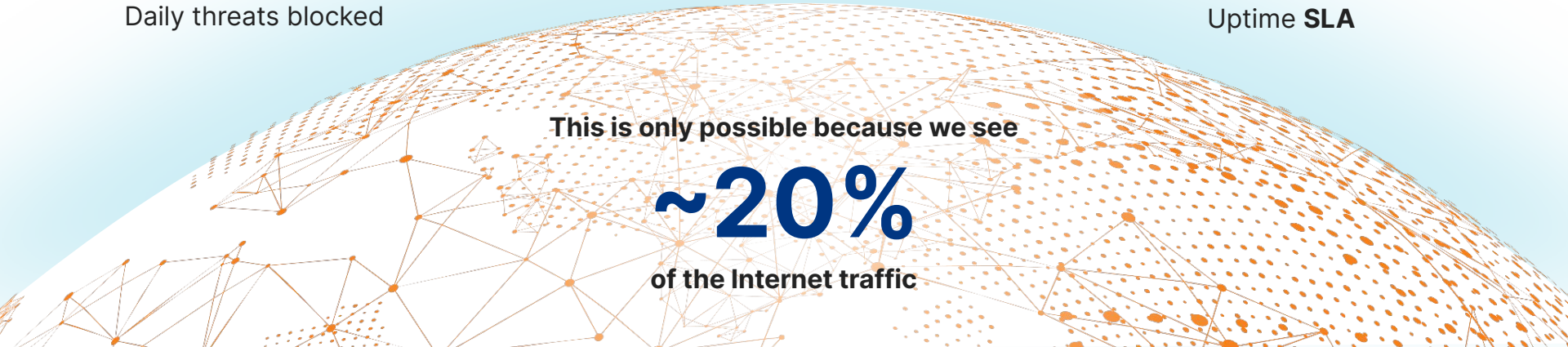
Daily threats blocked

95%

of world's Internet users within **50ms** of our network

100%

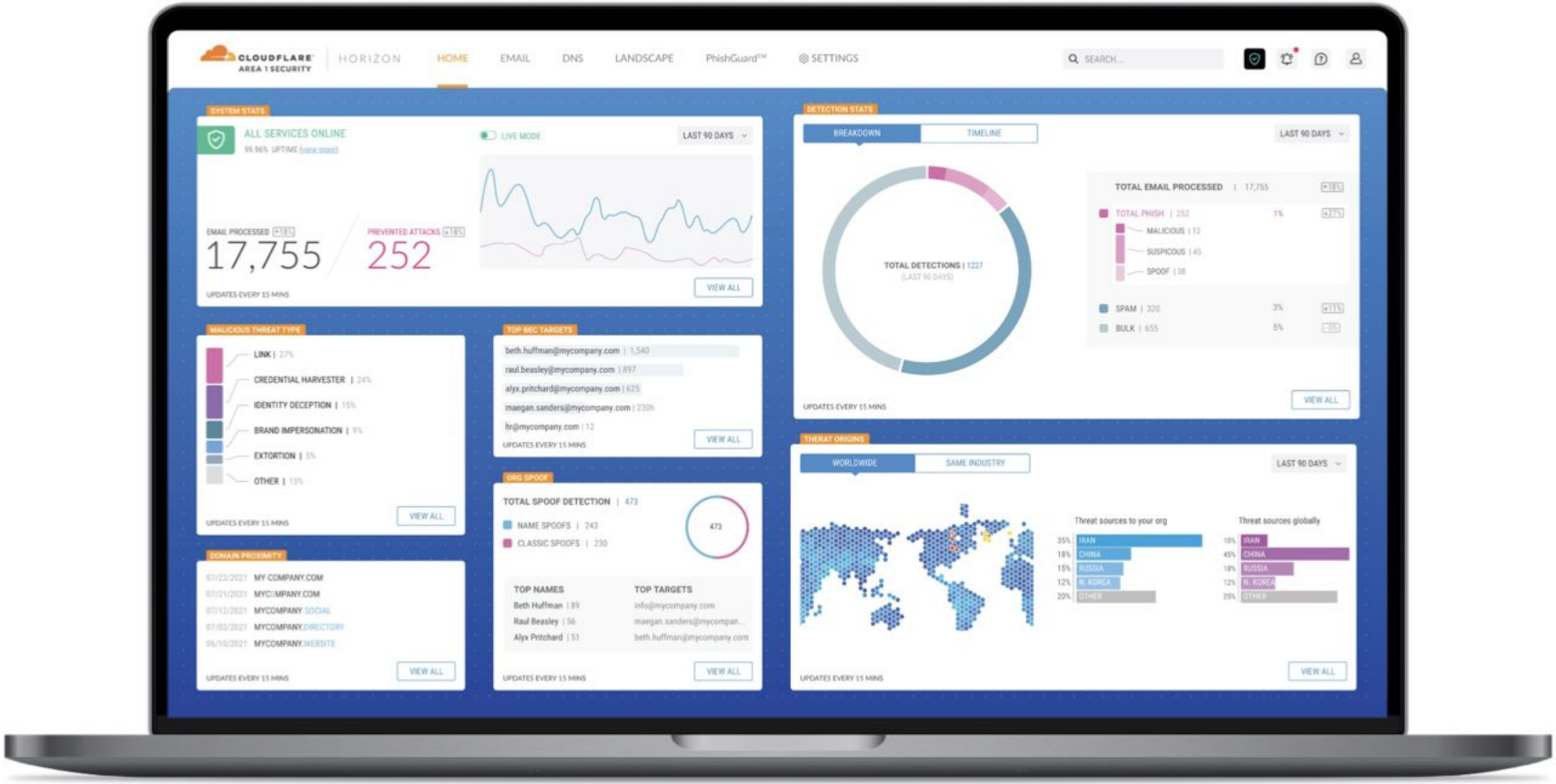
Uptime **SLA**



This is only possible because we see

~20%

of the Internet traffic


CLOUDFLARE AREA 1 SECURITY
HORIZON
HOME
EMAIL
DNS
LANDSCAPE
PhishGuard™
SETTINGS
SEARCH...
SYSTEM STATS
ALL SERVICES ONLINE
99.96% UPTIME (view more)
LIVE MODE
LAST 90 DAYS
EMAIL PROCESSED
17,755
PREVENTED ATTACKS
252
UPDATES EVERY 15 MINS
VIEW ALL
DETECTION STATS
BREAKDOWN
TIMELINE
LAST 90 DAYS
TOTAL DETECTIONS | 1227
(LAST 90 DAYS)
TOTAL EMAIL PROCESSED | 17,755
TOTAL PHISH | 252
MALICIOUS | 12
SUSPICOUS | 45
SPOOF | 38
SPAM | 320
BULK | 655
UPDATES EVERY 15 MINS
VIEW ALL
MALICIOUS THREAT TYPE
LINK | 27%
CREDENTIAL HARVESTER | 24%
IDENTITY DECEPTION | 15%
BRAND IMPERSONATION | 9%
EXTORTION | 5%
OTHER | 15%
UPDATES EVERY 15 MINS
VIEW ALL
TOP BEC TARGETS
beth.huffman@mycompany.com | 1,540
raul.beasley@mycompany.com | 897
alyx.pritchard@mycompany.com | 625
maegan.sanders@mycompany.com | 230
hr@mycompany.com | 12
UPDATES EVERY 15 MINS
VIEW ALL
ORG SPOOF
TOTAL SPOOF DETECTION | 473
NAME SPOOFS | 243
CLASSIC SPOOFS | 230
473
TOP NAMES
Beth Huffman | 89
Raul Beasley | 56
Alyx Pritchard | 51
TOP TARGETS
info@mycompany.com
maegan.sanders@mycompan...
beth.huffman@mycompany.com
UPDATES EVERY 15 MINS
VIEW ALL
THERAT ORIGINS
WORLDWIDE
SAME INDUSTRY
LAST 90 DAYS
Threat sources to your org
35% IRAN
18% CHINA
15% RUSSIA
12% N. KOREA
20% OTHER
Threat sources globally
10% IRAN
45% CHINA
18% RUSSIA
12% N. KOREA
25% OTHER
UPDATES EVERY 15 MINS
VIEW ALL
DOMAIN PROXIMITY
07/23/2021 MY-COMPANY.COM
07/21/2021 MYC0MPANY.COM
07/12/2021 MYCOMPANY.SOCIAL
07/02/2021 MYCOMPANY.DIRECTORY
06/10/2021 MYCOMPANY.WEBSITE
UPDATES EVERY 15 MINS
VIEW ALL

- Overview
- Traffic
- Security & Attacks
- Adoption & Usage
- My Connection
- Domain Rankings
- Outage Center
- Reports
- API

About Press Glossary

Collapse Sidebar

Domain information

TLS

WHOIS

Global

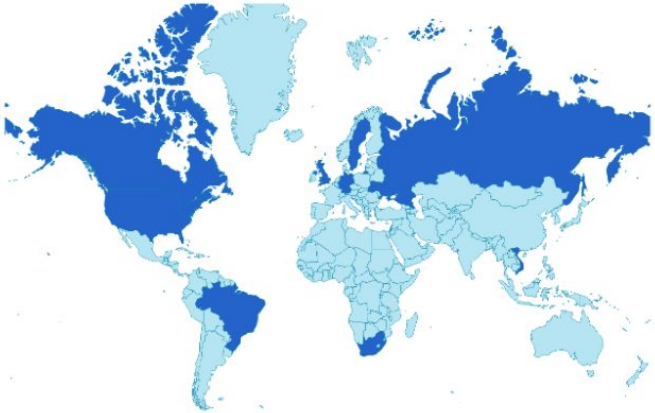
Domain categories

Search Engines | Technology

Domain Categorization Feedback

Visitor location

Tracking **google.com** popularity by location. Popularity & location insights are derived from Cloudflare 1.1.1.1 data



Ranking	Country	Perce
1	United States of America	
2	Vietnam	
3	Canada	
4	Germany	
5	Brazil	
6	Russia	
7	United Kingdom	
8	Sweden	
9	South Africa	
10	Ukraine	

WHOIS

Registration Information for **google.com**

Name

MarkMonitor, Inc.

TLS Certificates

Certificates issued by a trusted Certificate Authority for **google.com**

Issuing Organizations (0)	Country (C)	Common Name (CN)	# of certificate

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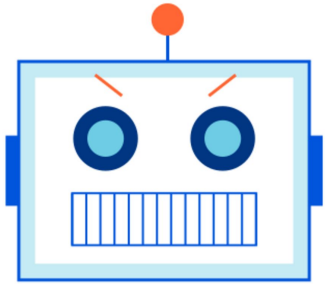
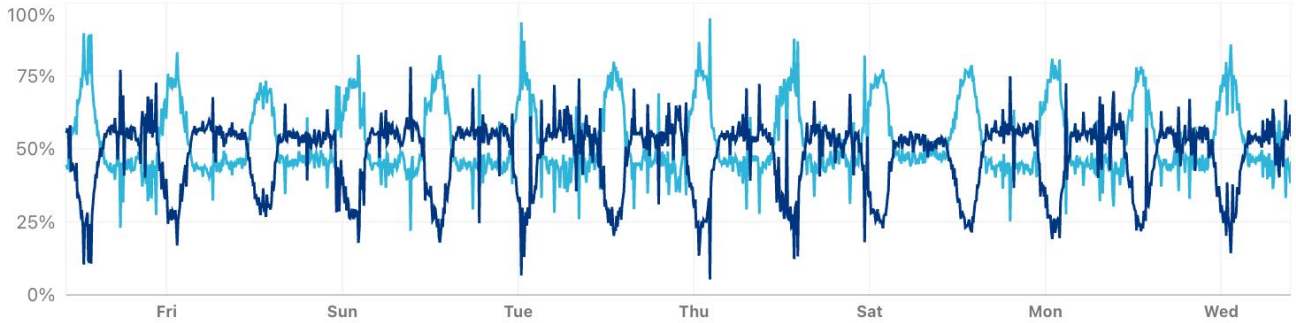
Bots: The good, the bad, and the ugly

Bot 50%

Human 50%





- Credential Stuffing
- Account Takeover
- Inventory Hoarding
- Content Scraping
- Credit Card Stuffing
- Content Spam
- API Abuse

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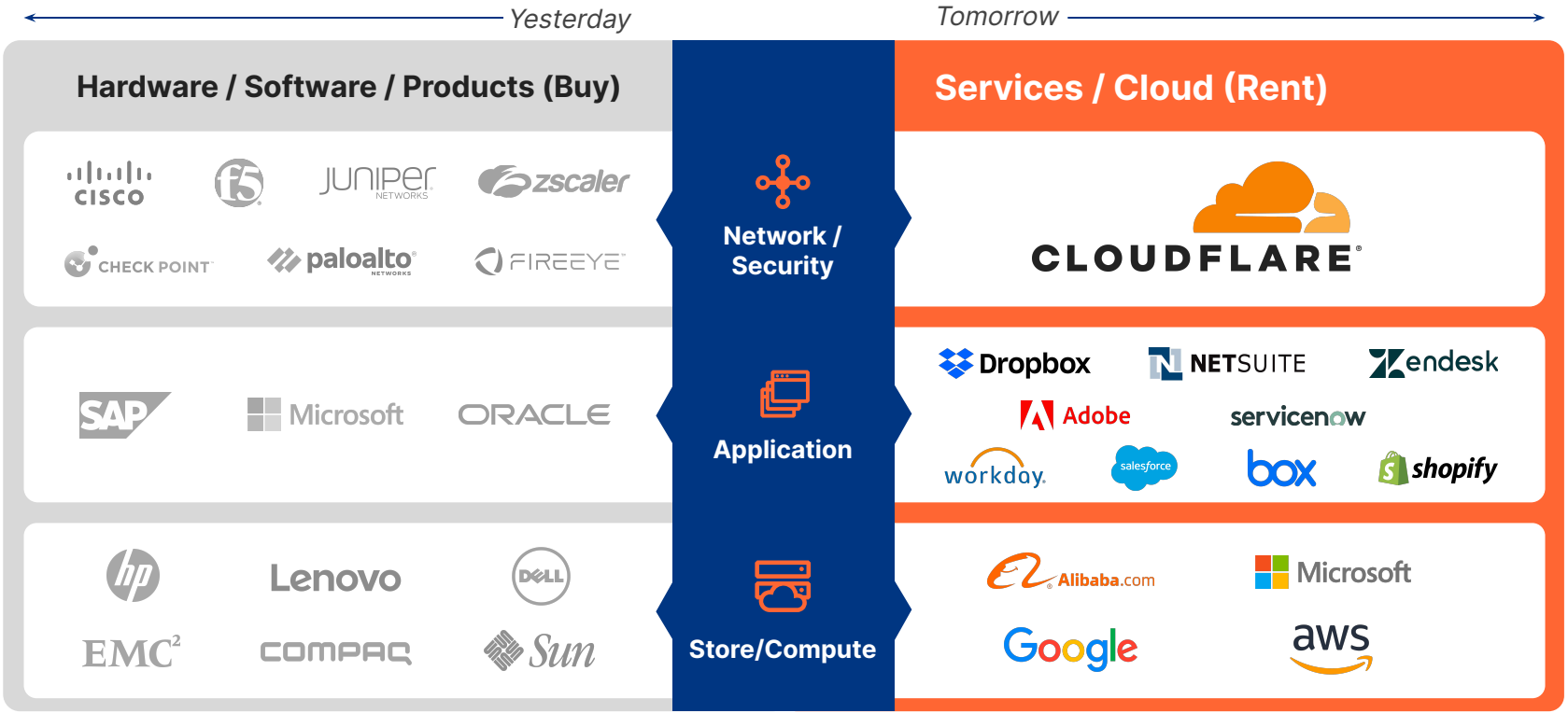
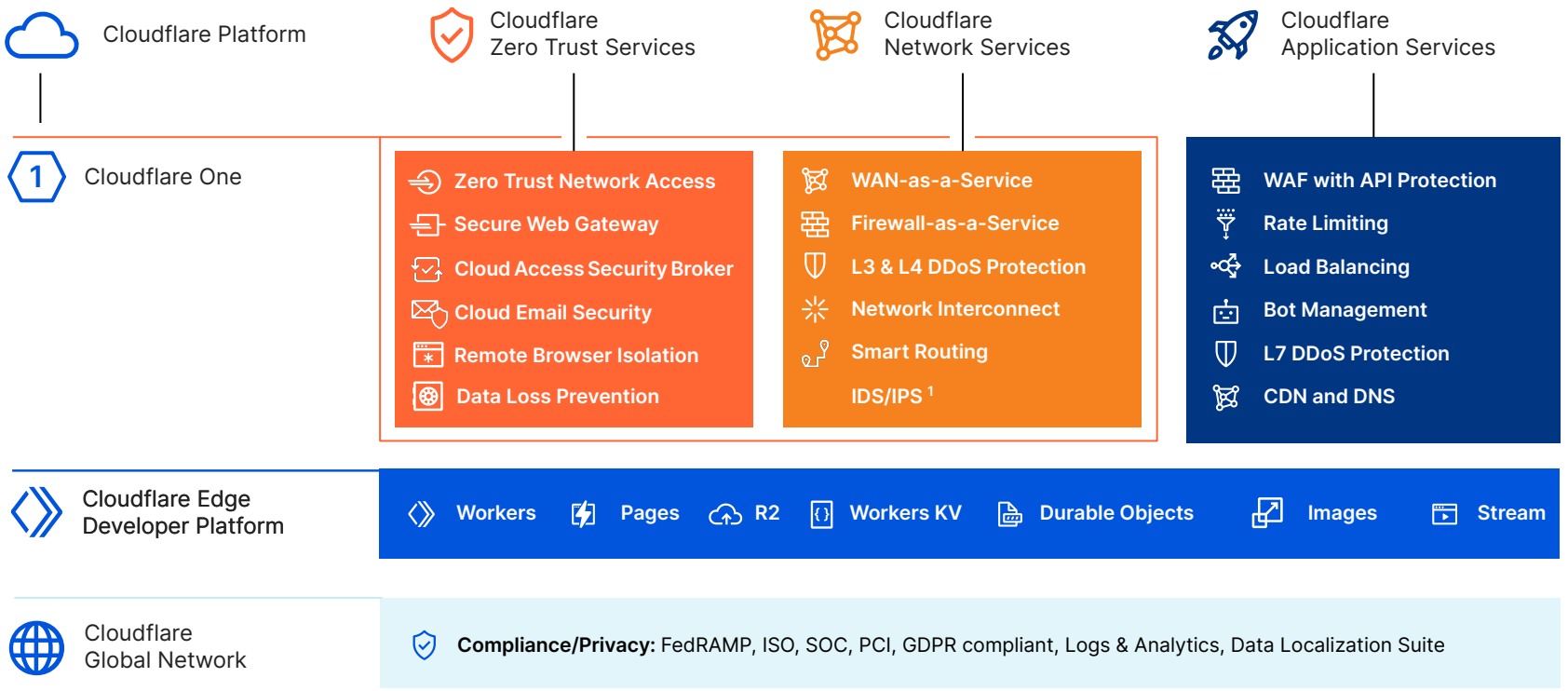
Cloudflare was built for what's next



WHAT WE OFFER

CLOUDFLARE



BurritoBot
Websites
Domain Registration
Analytics & Logs
Security Center
WAF
Turnstile Beta
Magic Transit
Magic Firewall
L3/4 DDoS
Zero Trust
Magic WAN New
Area 1
Workers
Workers for Platforms
Pages
R2
Collapse sidebar

Magic Firewall

Control unwanted traffic by monitoring risks and applying Firewall rules to your entire network on Cloudflare's edge.

Custom rules | IDS New

Custom rules

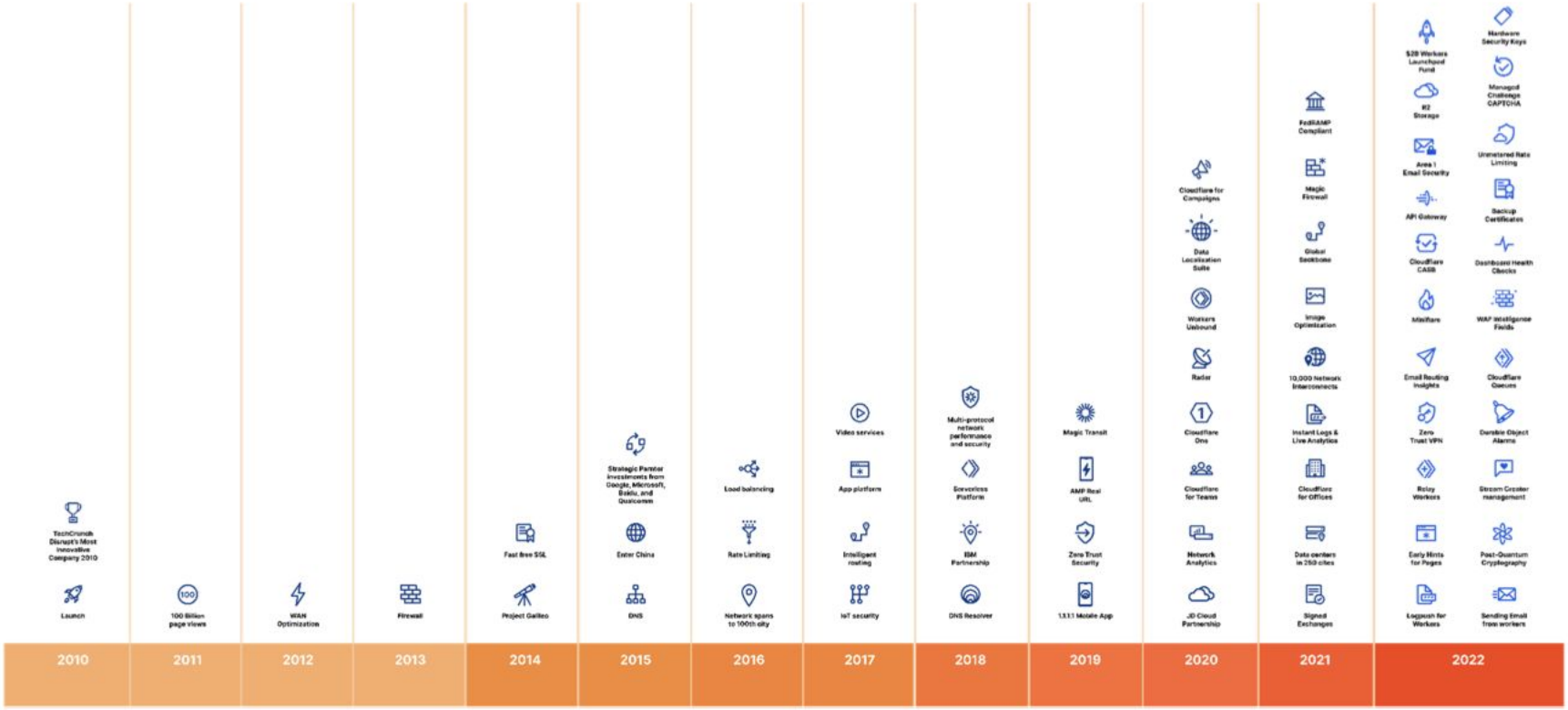
Create and manage security rules to filter the traffic that reaches your network. Traffic is matched in order of the configured rules. For additional information refer to the developer documentation.

Add a r

	Action	Description	Filter	Activity over the past hour	Enabled	
	Allow	lime Time to Live or; + 1 more ID a614288500...	equals 5 or; + 1 more	Not enough data		Edit | Delete
	Allow	test IP Source Address ID abd4d086d4...	equals 1.1.1.1	Not enough data		Edit | Delete
	Allow	Allow Web Traffic TCP Dst Port ID 26c3b96edd...	is in 80 ...	Not enough data		Edit | Delete
	Allow	some more rules IP Source Address ID e6cad7b220...	equals 1.23.4.5	Not enough data		Edit | Delete
	Block	IP Header Length ID 99a24c7f84...	equals 12	Not enough data		Edit | Delete

CLOUDFLARE

Move faster with a platform that constantly delivers innovation

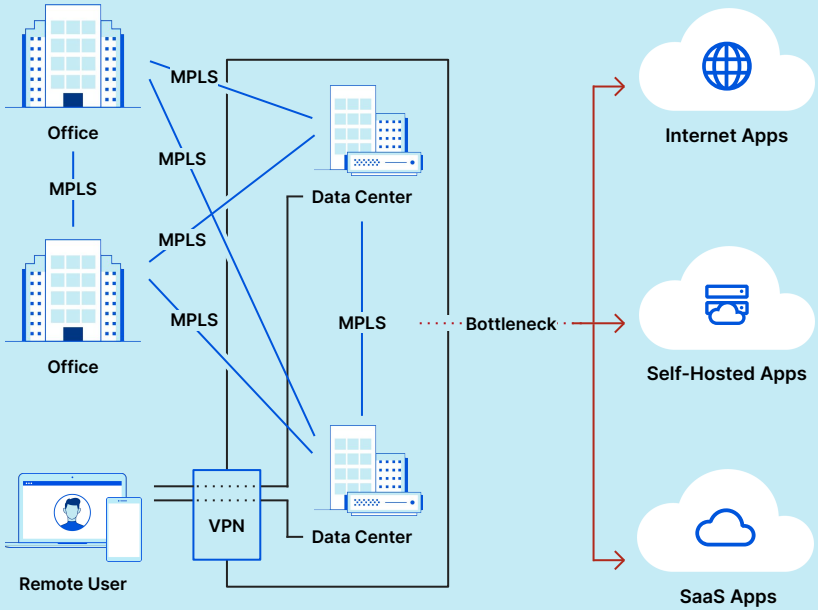


Cloudflare Zero Trust

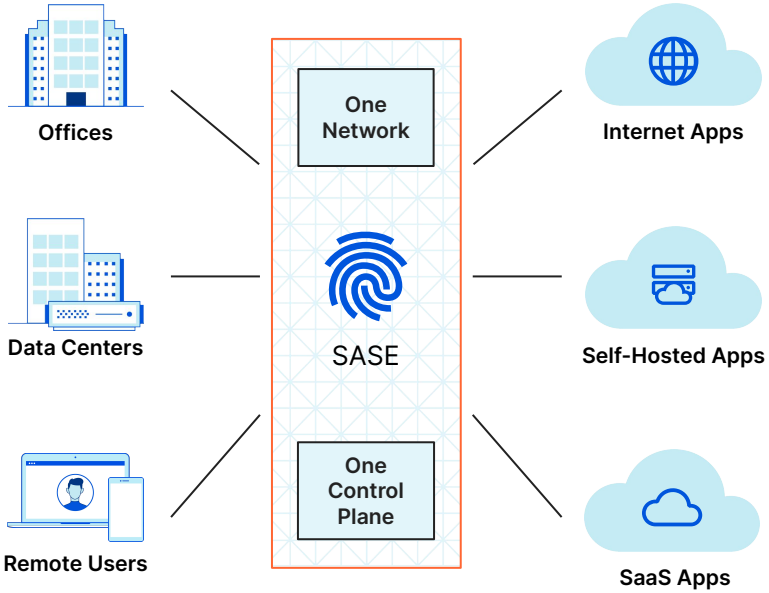
CLOUDFLARE

SASE is an architecture design for Zero Trust

Today's corporate network

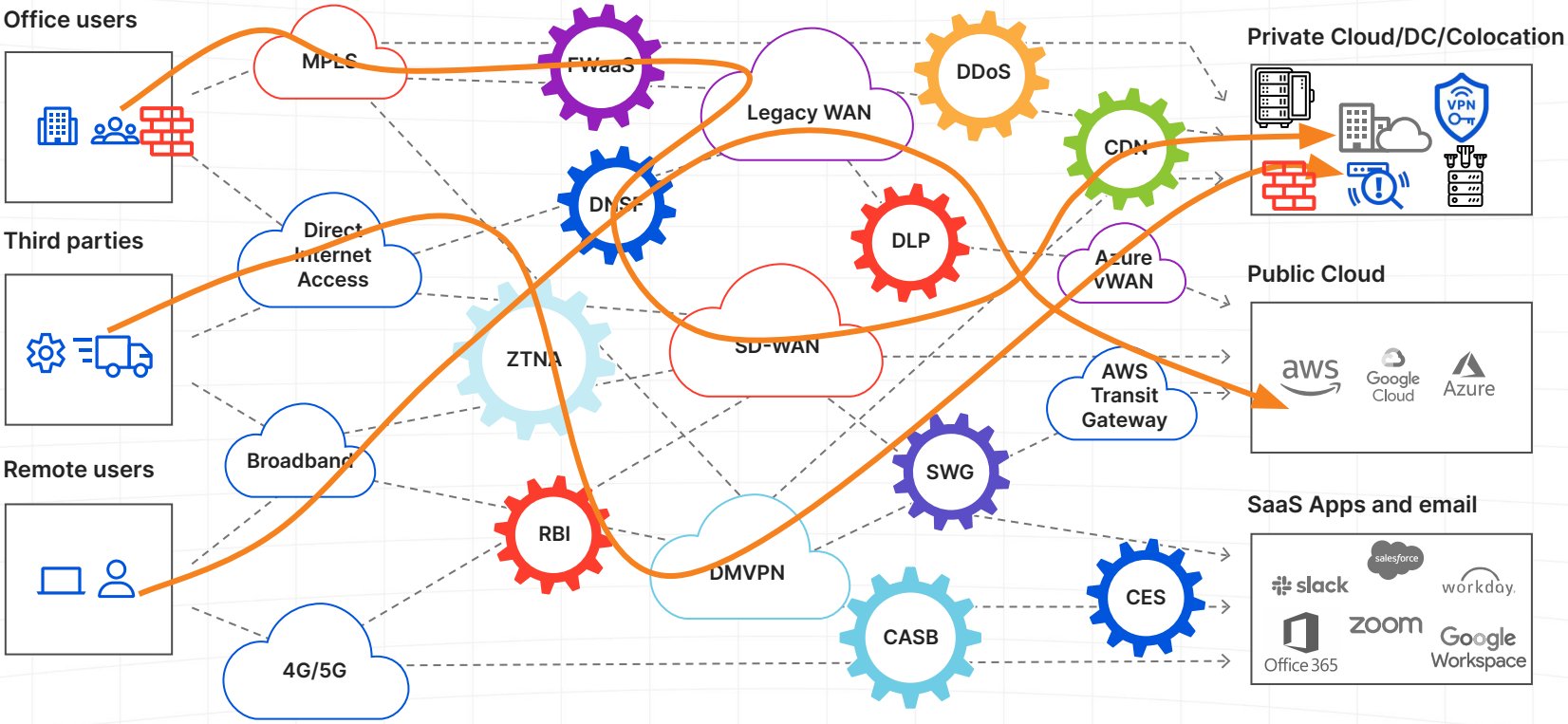


Internet-native connectivity with Zero Trust security built-in



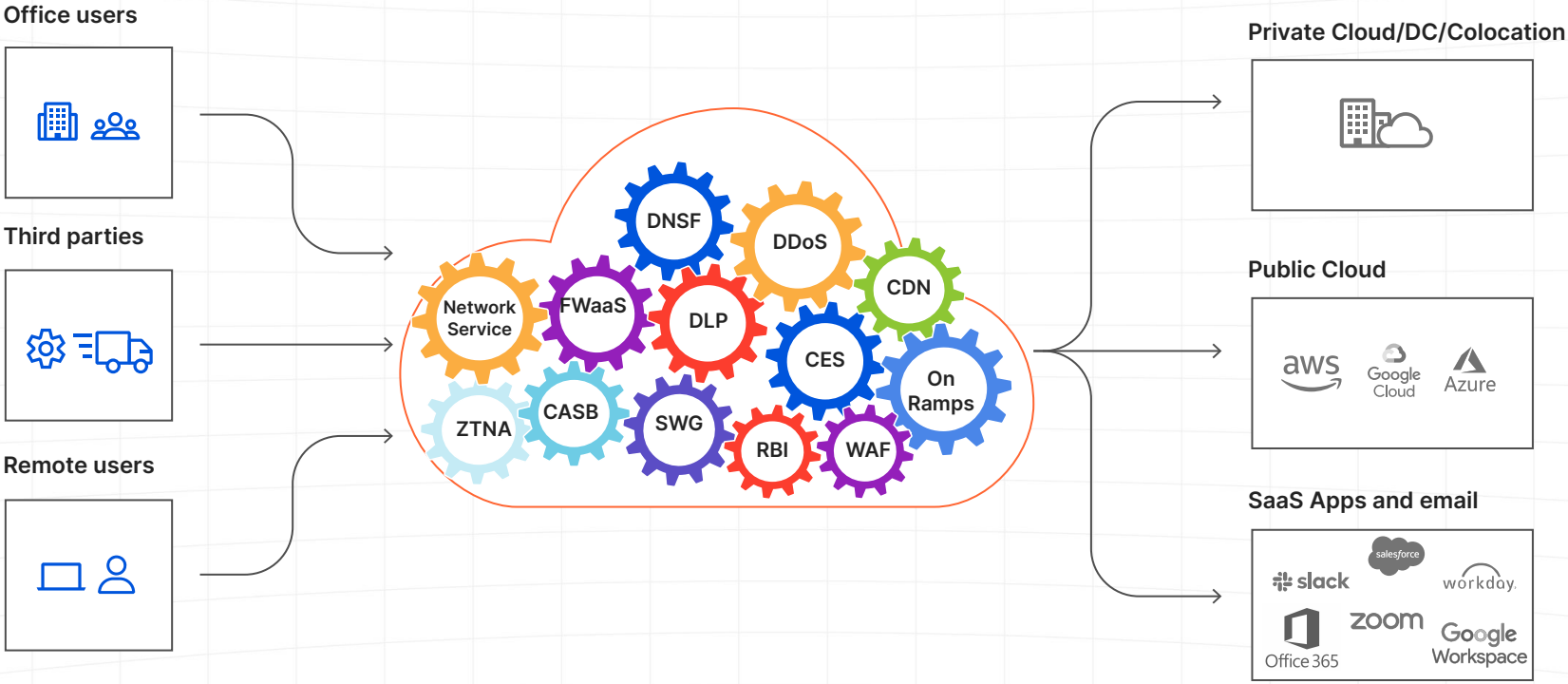
CLOUDFLARE

Today's fragmented corporate network

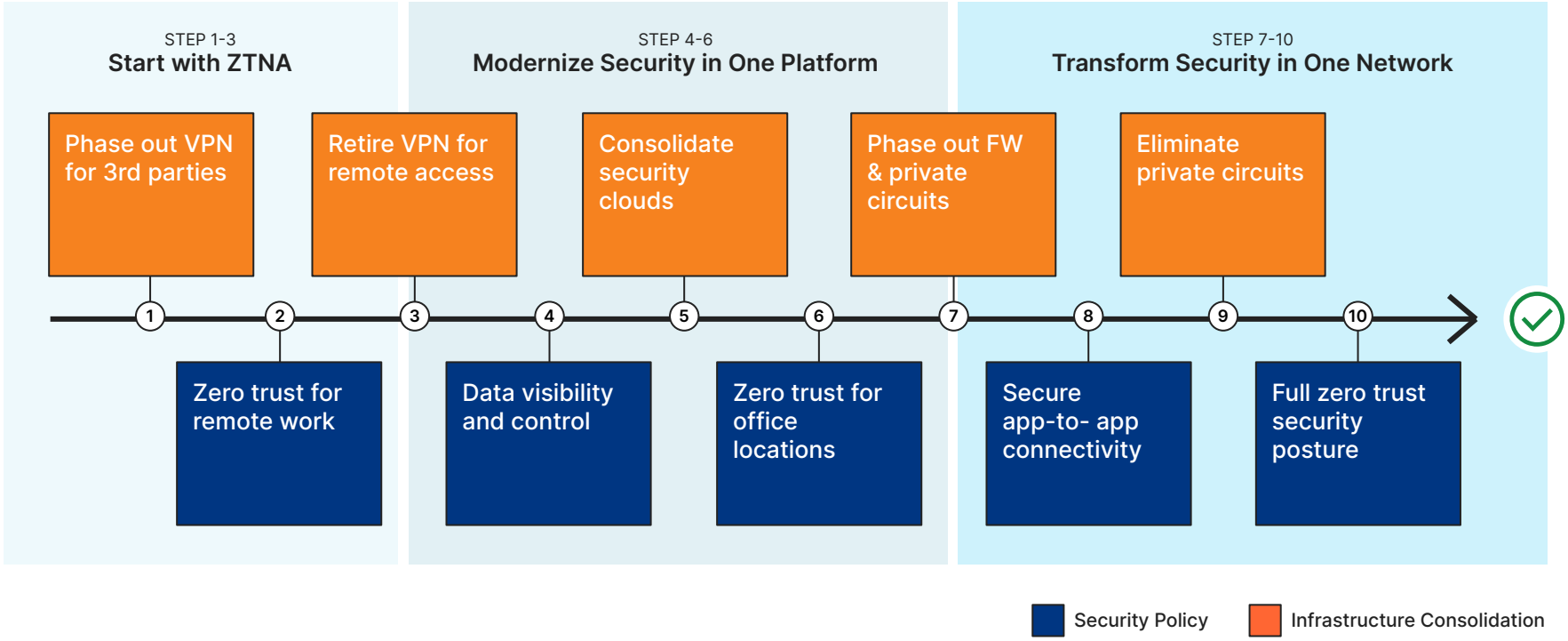


CLOUDFLARE

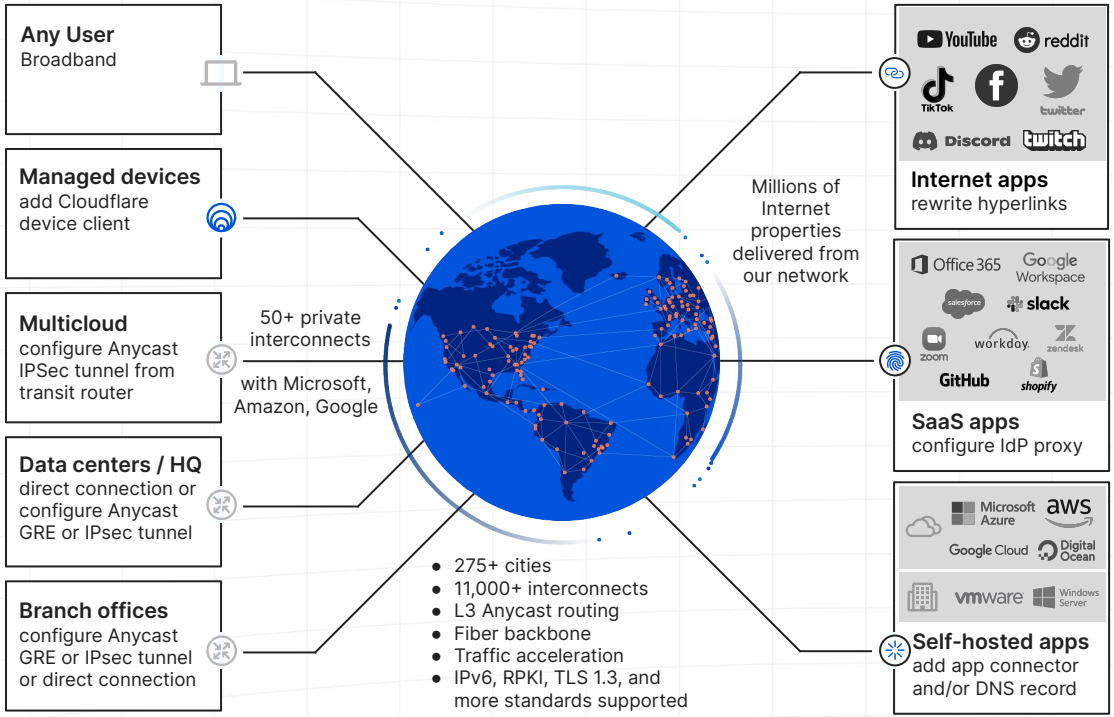
Any-to-any, end-to-end fabric



A common roadmap to Zero Trust
and single-vendor SASE



Simple deployments, flexible architecture



Composable on-ramps

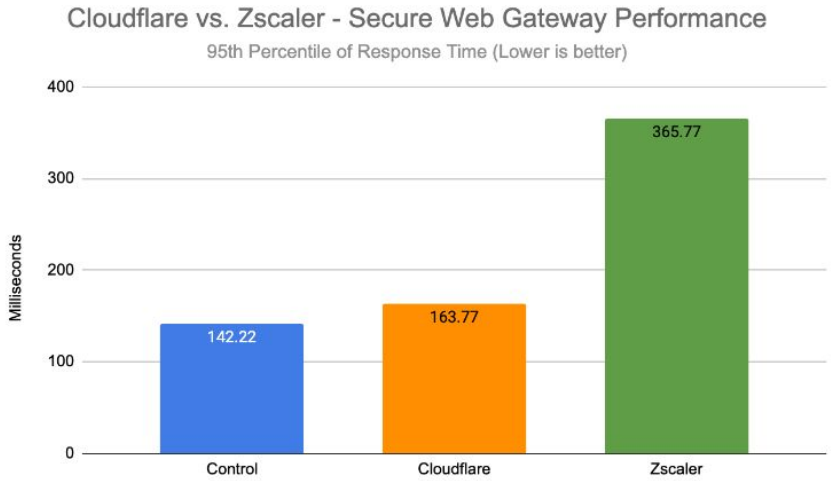
Clientless access
to rapidly adopt Zero Trust

Device clients
to fully replace your VPN

IP tunnels
over GRE/IPSec to phase out legacy MPLS networks

Direct connections
bring SASE to your doorstep at 1600+ colos and up to 1000 offices

The Cloudflare difference



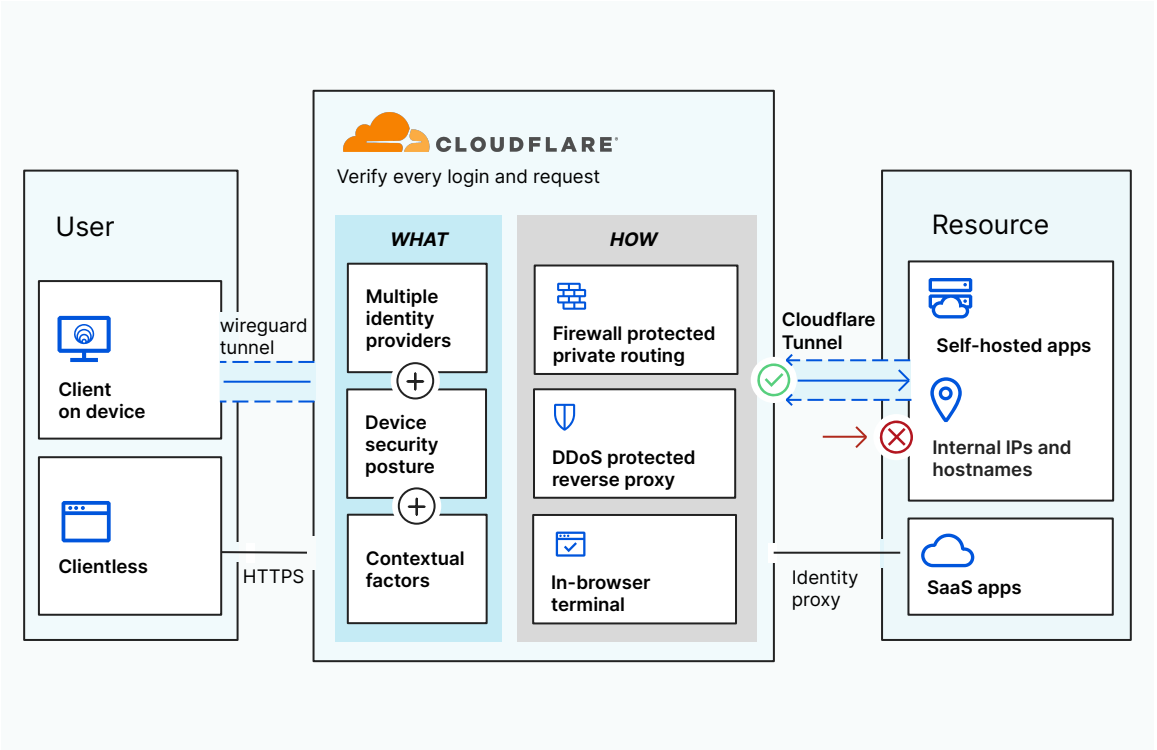
	Secure Web Gateway - Response Time
	95th percentile (ms)
Control	142.22
Cloudflare	163.77
Zscaler	365.77

- Cloudflare's anycast network delivers security without the performance hit
- Close to *Control* group, i.e. without using a proxy at all

https://sasecloudmap.com/

https://blog.cloudflare.com/network-performance-update-cio-edition/

VPN replacement or augmentation using Zero Trust Network Access



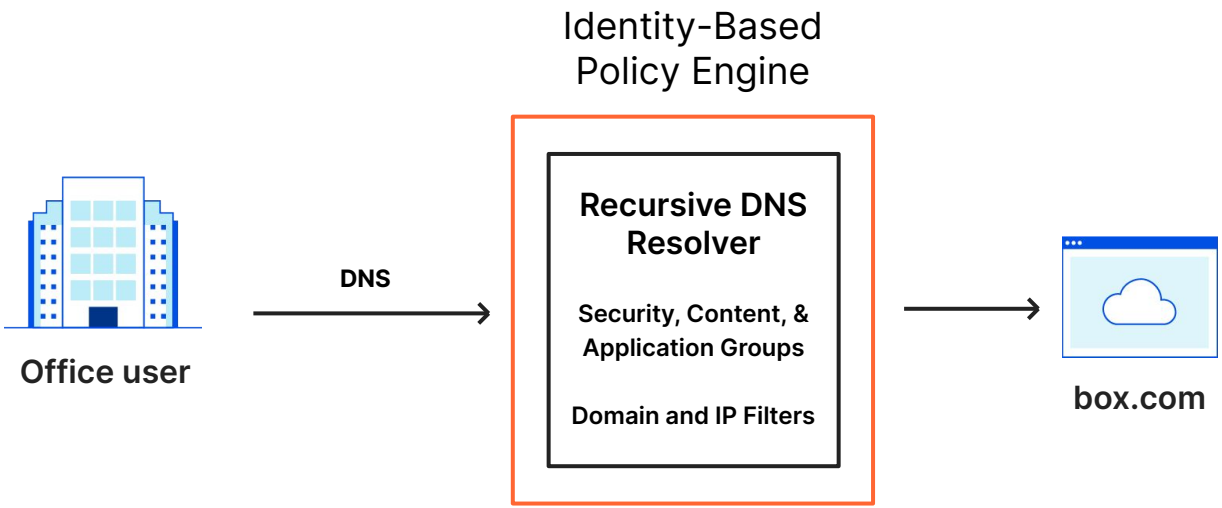
Same security and experience accessing legacy non-HTTP apps as modern apps

Built-in, industry-leading DDoS & FW protections to ensure that your resources are always available

Unify network and cloud access in minutes

DNS filtering for office locations

Level 1: Protect office locations with DNS filtering

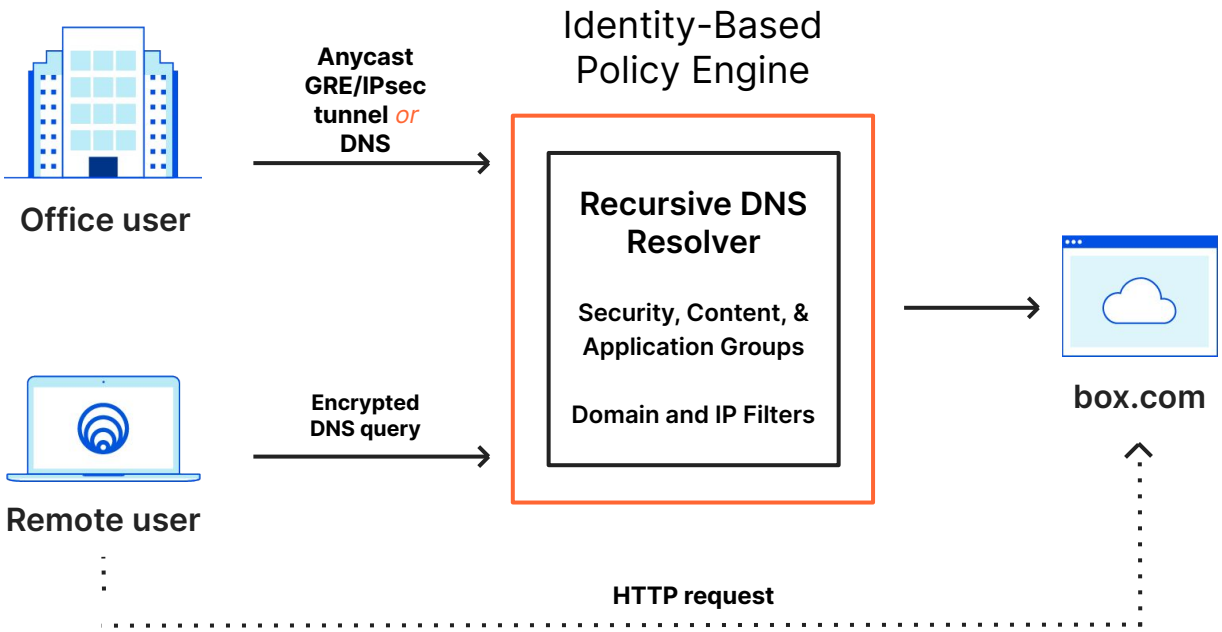


1. Source IPv4 or IPv6 address checked for location
2. Query checked for policy adherence
3. Query blocked, allowed, or overridden
4. Allowed domain resolves
5. Site loads for user

CLOUDFLARE

DNS filtering for remote workers

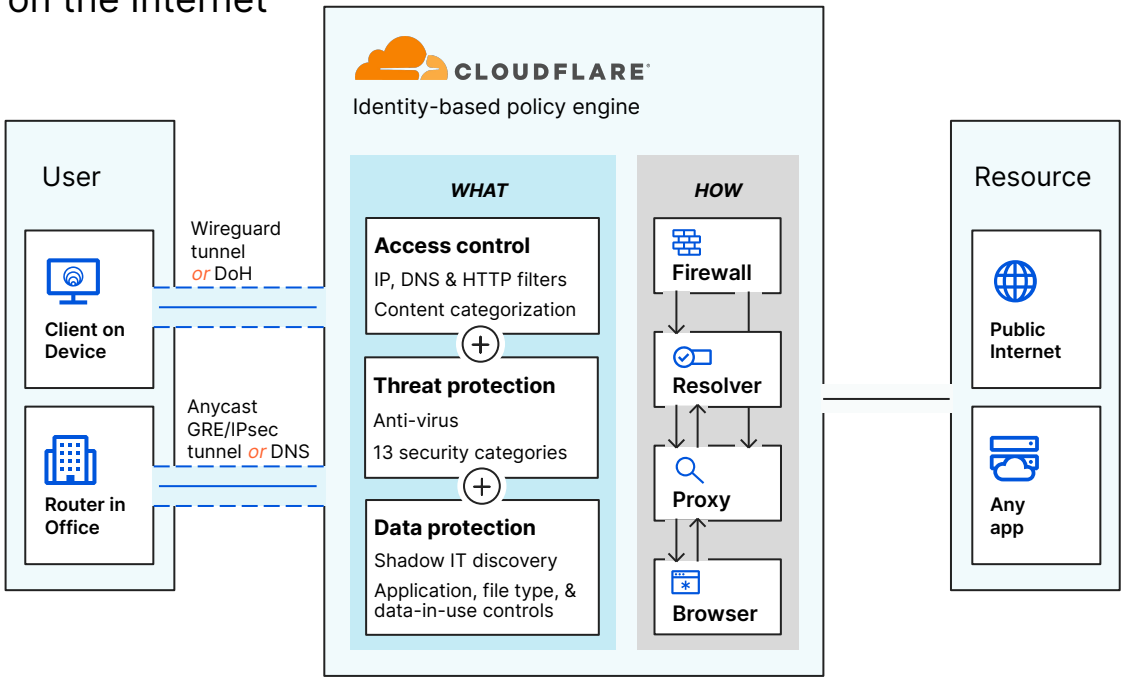
Level 2: Protect remote workers and office locations with encrypted DNS filtering



1. DNS query encrypted over DoH or DoT
2. Encrypted query sent to Gateway
3. Query decrypted
4. Query checked against policy
5. Query blocked, allowed, or overridden
6. Allowed domain resolves
7. Site loads for user

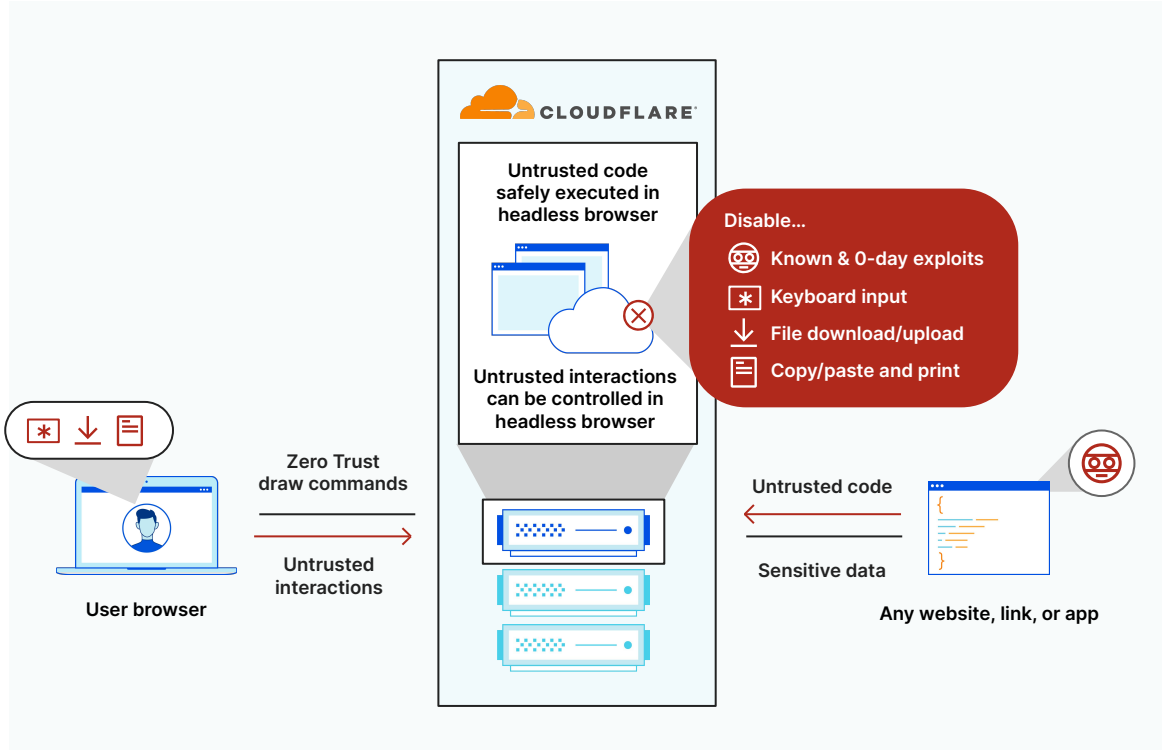
Secure Web Gateway for Work from Anywhere

Level 3: Protect office locations, remote users, and corporate data from threats on the Internet



1. WARP encrypts all Internet-bound traffic
2. Sends HTTP and DNS requests to Gateway
3. Query decrypted
4. Query checked against policy
5. Query blocked, allowed, or overridden
6. Allowed domain resolves
7. Gateway intercepts traffic over port 80 and 443
8. Request checked against policy based on configured enforcement order
9. Request blocked or allowed
10. Site loads for user

Perfected Internet protection via Zero Trust web browsing and email links



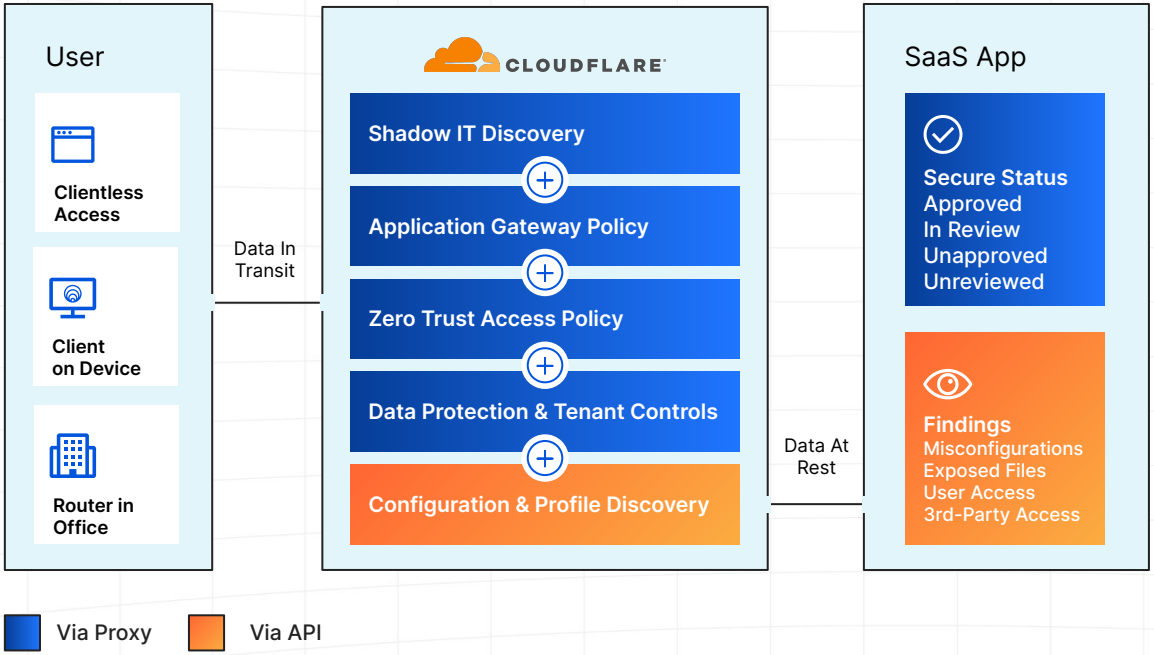
Reduce attack surface
Safely visit uncategorized or risky sites without overblocking users

Stop data loss
Enable contractors or BYOD to access apps with sensitive data

Compatibility with all browsers
No page scrubbing, so it works natively with any site or app

Lightning-fast user experience
No pixel pushing, so it feels no different than local browsing

Secure your SaaS applications



Current API Integrations

Google Workspace

Microsoft 365

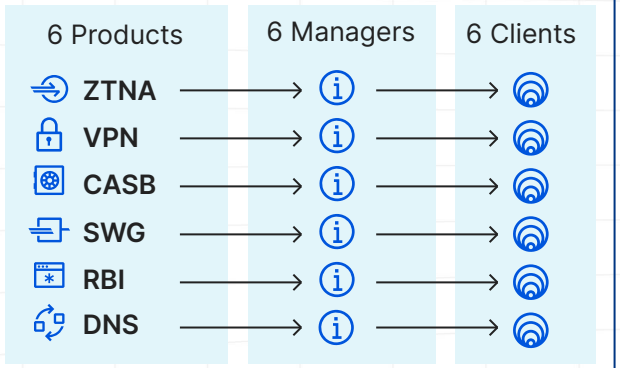
slack GitHub

salesforce box

CLOUDFLARE

Reduce burden on tech and operations

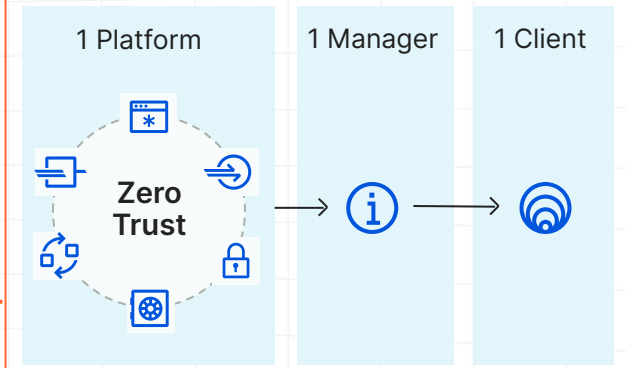
Traditional Approach

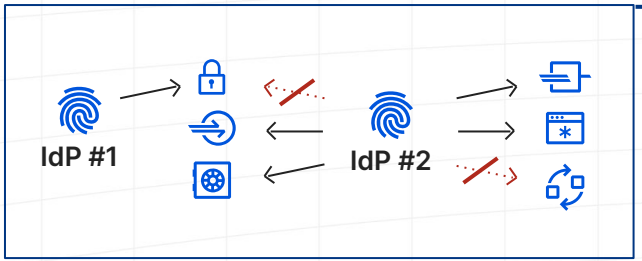


Problem #1:
Multiple point products require multiple policy managers, and multiple client deployments

Solution:
One seamless platform uses one policy manager, and one client deployment

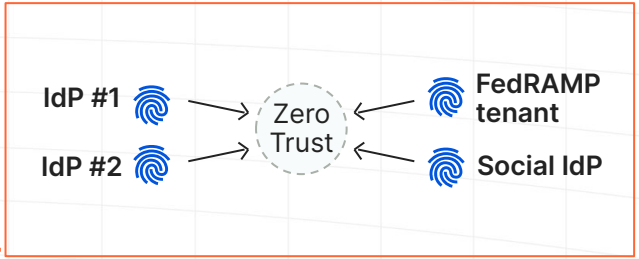
Cloudflare





Problem #2:
Integrate only one identity provider (IdP) repeatedly and inconsistently

Solution:
Integrate many IdPs and tenants of the same IdP just once



CLOUDFLARE
AREA 1 SECURITY

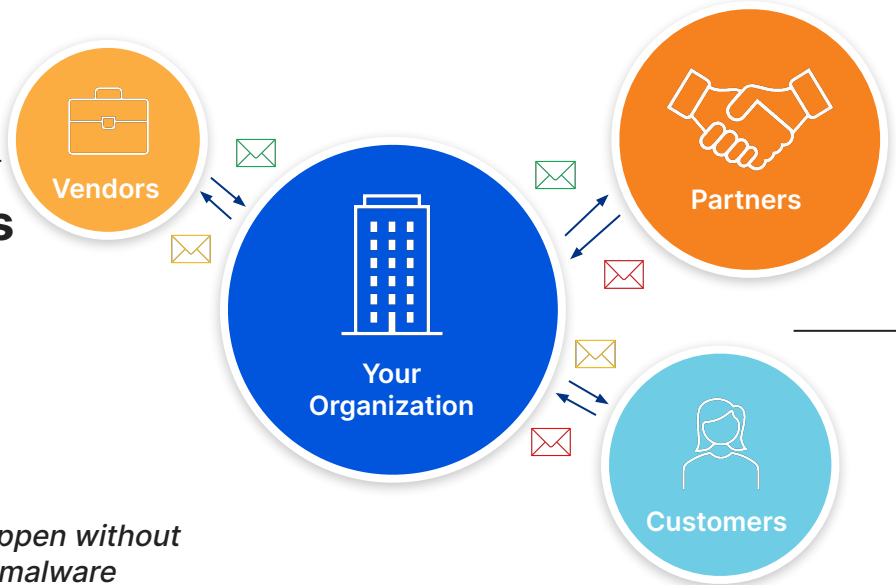
Email is the ...

#1 way organizations communicate

70%

of organizations use cloud email solutions today. (Gartner)

- *Email attacks can happen without network intrusion or malware*
- *Extends beyond direct employee access decisions*



#1 threat attack vector

91%

of all cyber attacks begin with a phishing email. (Deloitte)

CLOUDFLARE
AREA 1 SECURITY

Preemptive

Early Discovery
Campaign Hunting
Actor Infrastructure
Monitoring

Comprehensive

Multi-Variety Attacks
Multi-Channel Attacks
Multi-Vector Attacks

Continuous

Pre-Delivery
At-Delivery
Post-Delivery

Accountable

SLAs
Privacy
Biz Model

Contextual

Natural Language
Understanding
Sentiment Analysis
Intent, Tone & Relationships

CLOUDFLARE
AREA 1 SECURITY

PREEMPTIVE

Campaign Hunting

- Preemptive Crawling
- Frontier Management - Static & Dynamic
- User Impersonation & Browser Emulation
- Dual Sandboxing (In-the-wild & Delivery)

CONTEXTUAL & COMPREHENSIVE

Type 2/3/4 BECs

- Sentiment Analysis
- Conversation / Thread Analysis
- Partner Social Graph
- Active Fraud Verdict Escalations

URLs & Payloads

- Deep Link Traversals & Instant Crawls
- Deep Payload URL Assessment
- Blind URL Assessment
- New Domain Assessments
- Encrypted Attachment Scanning
- Image Analysis & Vector Mapping

Area 1 Email Security

CONTINUOUS & ACCOUNTABLE

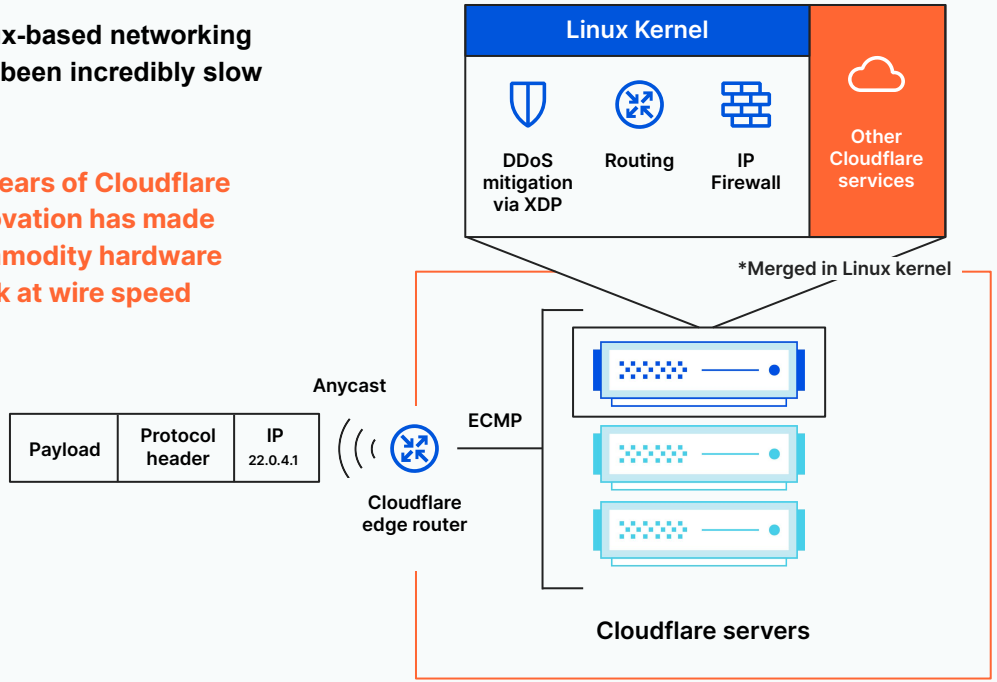
- Integrated Prevention, Detection & Response
- Integrated API & Orchestrations
- Rapid Scale Indexing, Retrieval & Search
- Single Pane With Zero Touch Service
- Cloud Native With Adaptive Scaling
- Multi-mode Protection
  MX / API / CONNECTOR / JOURNALING / BCC / DNS

Cloudflare Network Services

Linux-based networking had been incredibly slow

↓

10 years of Cloudflare innovation has made commodity hardware work at wire speed

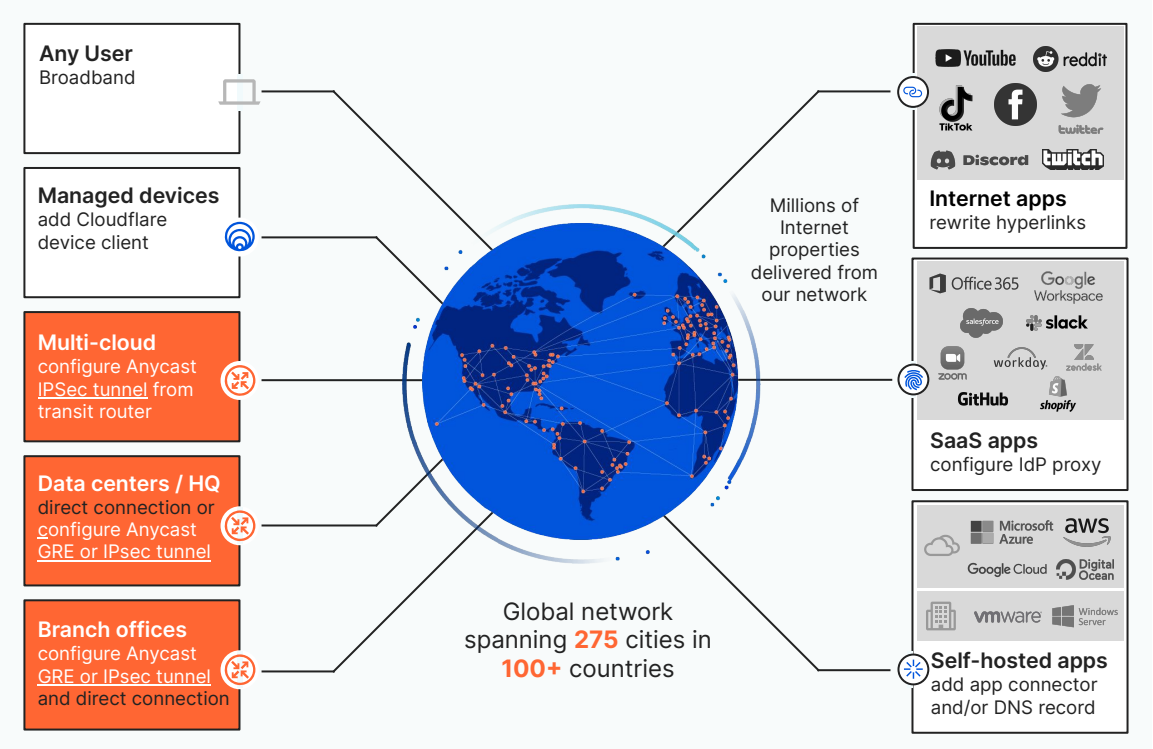


Cloudflare data center

*Merged in Linux kernel...

- **Express data path (XDP)** **In 60µs or less,** analyze, move or drop raw link-layer packets with secret sauce being the logic and filters to automatically mitigate attacks
- **Inter-DC load balancing** **Anycast routing** ensures no single DC gets overloaded
- **Intra-DC load balancing** **ECMP routing** ensures no single server gets overloaded

Magic WAN



Cloudflare Magic WAN

GRE or IPSec tunnels use existing CPE, cloud transit gateways, or using pre-built SD-WAN integrations

Benefits

- Retire expensive MPLS services
- Retire legacy security appliances — firewall-as-a-service and SWG built natively into the network
- Avoid traffic backhaul to hub sites and improve app performance
- Simplify site-to-site connectivity with Anycast IPSec
- Performance advantages of full-mesh, with the simplicity of classic hub-and-spoke

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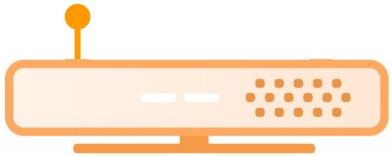
Magic WAN Connector

CF (v)CPE

BYO OR
CF FOR OFFICES

CF EDGE



BYOD or
Cloudflare certified device

Cloudflare CPE software

Internet circuit 1

Internet circuit 2

x2 Internet circuits for redundancy

Cloud-native:

Secure Service Edge
(ZTNA, SWG, CASB)

RBI + DLP + ICES

Cloud Firewall + IDS/IPS

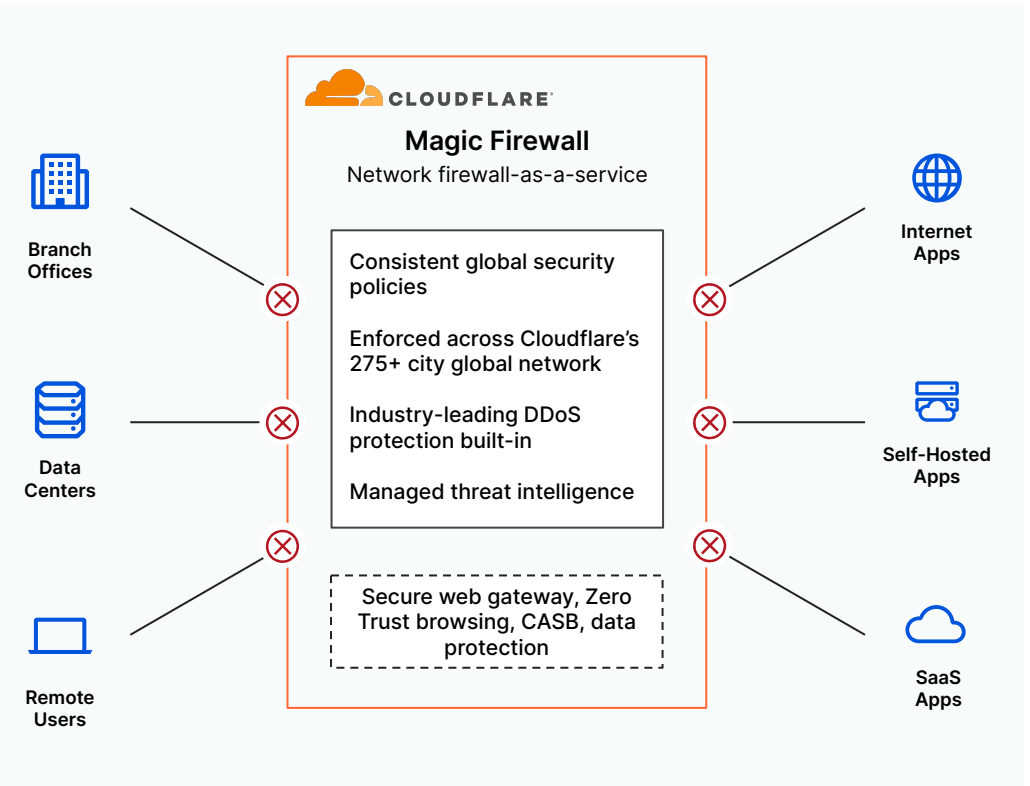
WAN Optimization

DDoS mitigation

Magic Firewall: cloud-native security for your entire network

Magic Firewall — enforce consistent security policies across your branch offices, data centers, cloud properties and end-user devices.

- Consistent security policies — deployed globally in under 500ms
- No appliances to manage — automatically scale with your business needs
- Eliminate unwanted traffic before it reaches your network
- Managed threat intelligence gleaned from the Cloudflare global network
- Optional upgrade to Secure Web Gateway, CASB, Zero Trust browsing

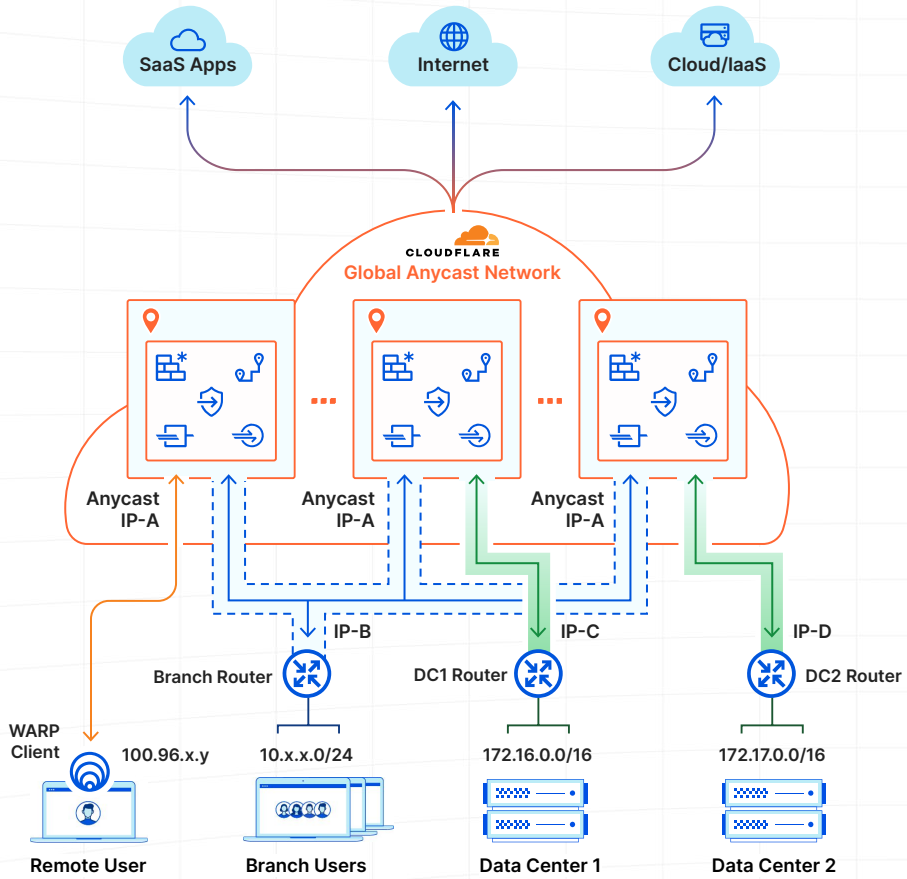


Troubleshooting made easy

- Quickly identify traffic anomalies
- View changes in traffic based on criteria such as, IP protocols, TCP flags, source country
- Take necessary remedial action to fine-tune your configuration

MAGIC WAN WITH ZERO TRUST

Magic WAN: data center on-ramp with CNI



Each data center in Cloudflare's global anycast network delivers all Cloudflare services, including Magic WAN, Magic Firewall, Zero Trust and DDoS services

Anycast IPsec/GRE Tunnels between customer site routers and Cloudflare global anycast network

CNI (direct connect) between customer data center site routers and nearest Cloudflare data center

WARP connections between remote users and Cloudflare global anycast network

Higher cost MPLS or dedicated L2 circuits offering lowest latency between Data Centers

- **On-ramp to Cloudflare Magic WAN**
  - Customer branch sites with IPsec/GRE tunnel-capable routers on-ramp to Cloudflare Magic WAN via Anycast IPsec/GRE tunnels
  - Customer data center sites with close proximity to Cloudflare CNI data centers on-ramp to Cloudflare Magic WAN via CNI
  - Remote users on-ramp to Cloudflare Magic WAN via WARP client on their devices
- **Full-mesh Magic WAN** network connectivity (RFC 1918 address space) between all sites and users over Magic WAN
- **Web access** with Zero Trust control from all sites and users via Magic WAN + Cloudflare Zero Trust services
- **Fine-grain security and control**
  - Magic Firewall
  - Cloudflare Zero Trust

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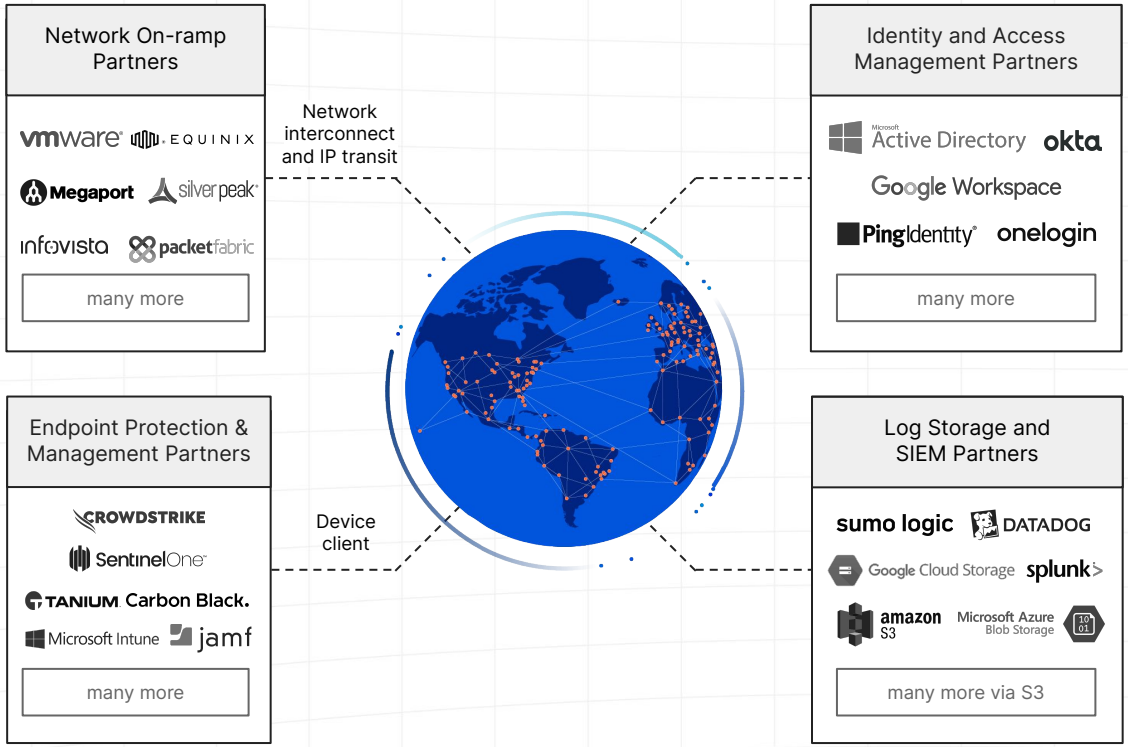
Cloudflare Platform

Make it fit in the bigger picture



We fit into your world

Identity, endpoint, and cloud agnostic

Concurrently use multiple providers

Programmable interface with Terraform automation

Securing Microsoft

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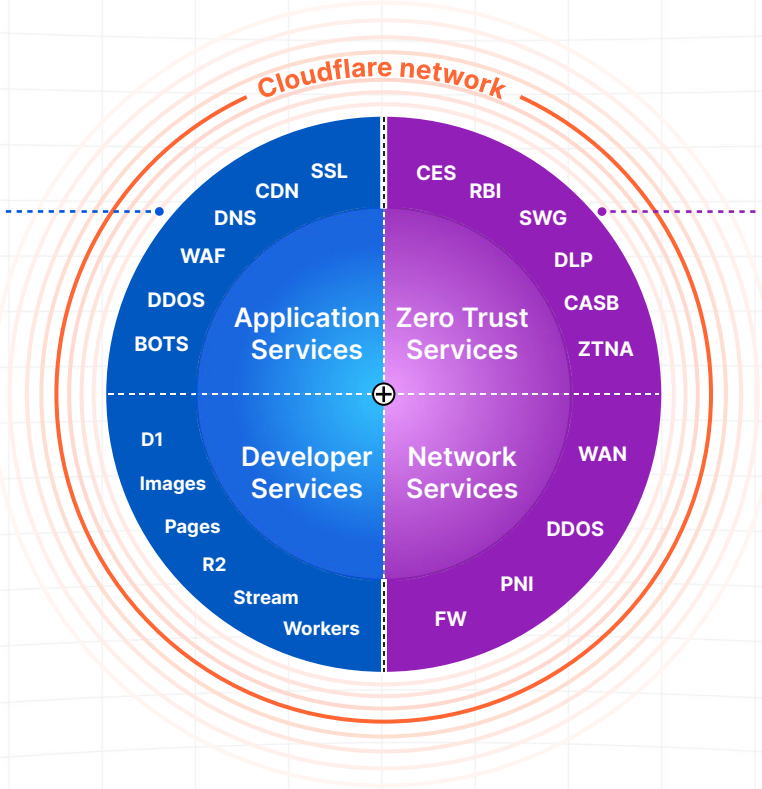
Azure Routing Preference
Enable customers to be more multi-cloud and use industry-leading products

Azure Sentinel
Help customers analyze logs and drive insights for their web applications



Azure Active Directory
Enable secure authentication to customers' employees

Microsoft 365
Improve protection with a preemptive, comprehensive, accountable defense from socially engineered phish

Zero Trust for Azure Apps
Enable secure access to customers' on-premise applications or Azure-hosted apps without needing a VPN

Microsoft Intune
Identify, investigate, and remediate threats faster, and securely manage customers' devices from a single platform

Microsoft NPP
Deliver a fast, secure Office 365 experience to customers' employees

Cloud App Defender
Detect a variety of security, data loss prevention, and misconfiguration risks

REPORTING AND AUDITING

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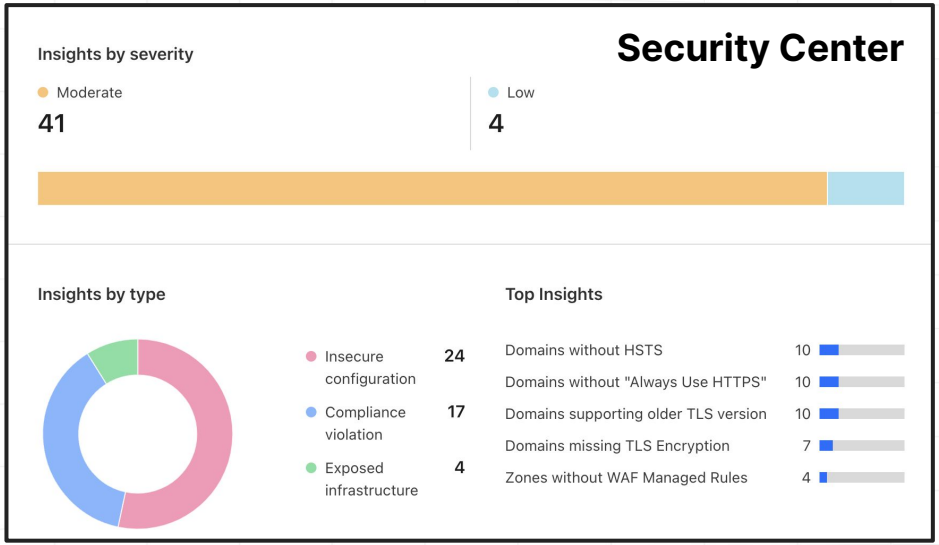


Cloudflare dashboard	**6 months** retention	**Analytic** summaries	**Workplace** records
Cloud storage platforms	amazon web services S3	Microsoft Azure Blob Storage	Google Cloud Storage
SIEM platforms	splunk>	sumo logic	DATADOG

REST API and Terraform – for SOAR and Audits

Meer informatie?

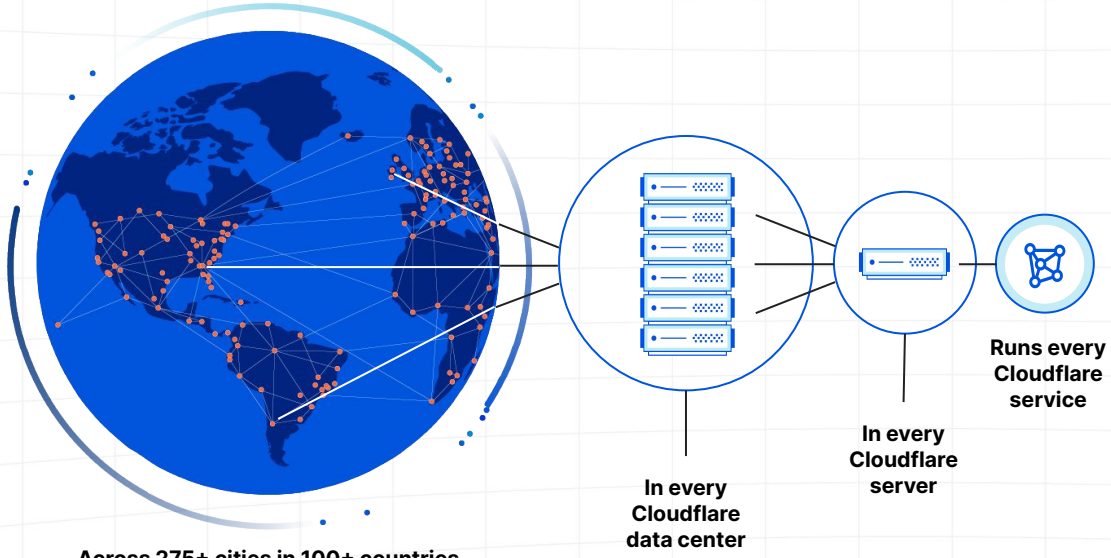
- **Blijf hangen voor de lunch**
- 0800 - BEL JAN
- Start een gratis Phishing Risk Assessment

zerotrustroadmap.org www.cloudflare.com

michiel.cloud/flare

Thank You

Make the Internet secure, fast, and reliable
for your business



172 Tbps
of network capacity
with 11,000+ interconnects and
millions of internet properties

~50ms
from 95% of
Internet users

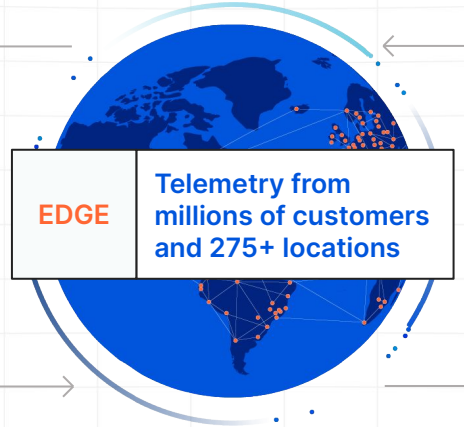
100%
uptime SLA

Comprehensive coverage
against Internet-borne threats

CORE Intelligence based on our machine learning

Threat hunting using our network data

- 1T+ DNS requests resolved per day with no sampling
- Millions of Internet properties
- 11,000+ network interconnects



CORE Intelligence based on our ecosystem

Threat aggregation across our partners

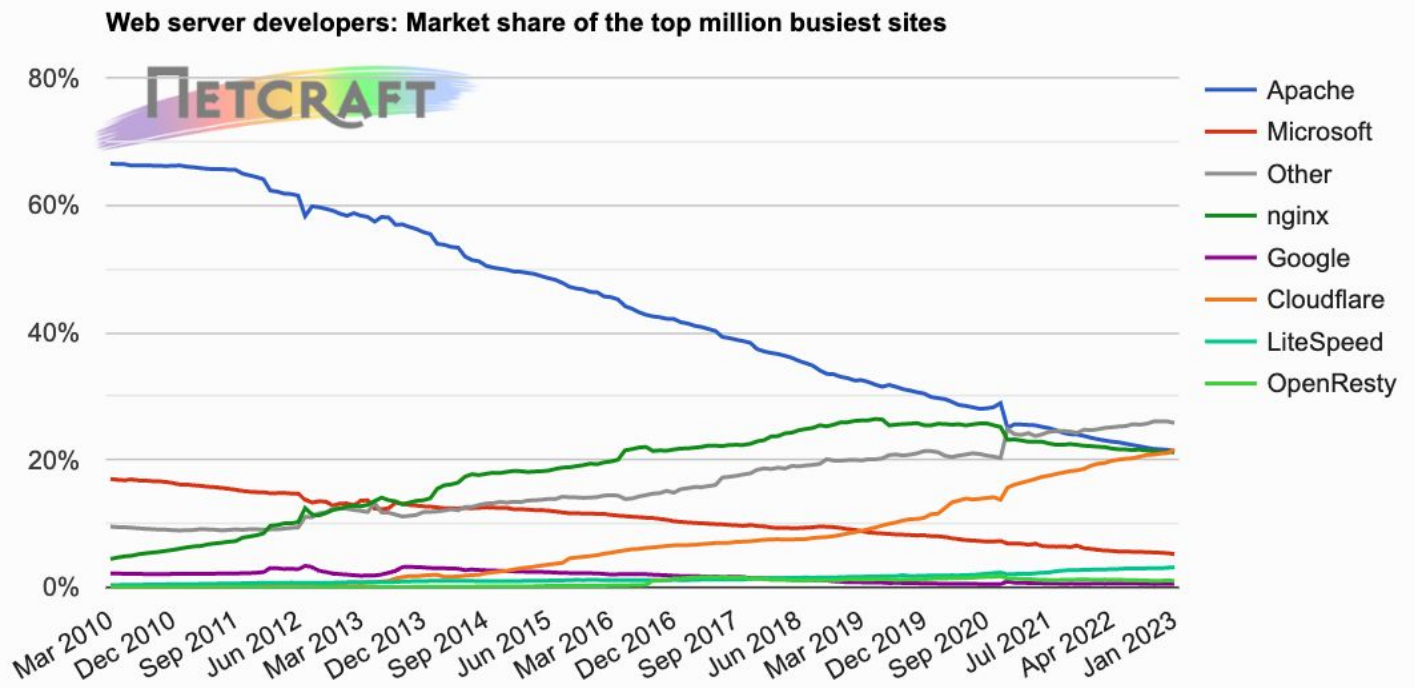
- Premium third-party feeds
- OSINT and shared feeds
- Community-provided feedback

Security risk categories to block, isolate or logpush to SIEM per policy rule

Malware	Newly seen domains	DGA domains	Spyware
Phishing	New domains	DNS tunneling	Spam
Cryptomining	Unreachable domains	C2 & botnet	Anonymizer

Comprehensive coverage against Internet-borne threats

The Cloudflare Advantage



Source: Netcraft January 2023 Web Server Survey

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Network and Information Security – v2

European Council
Council of the European Union

- Broadened scope
- Executive-level oversight and accountability
- Risk management – including supply chain diligence
- Incident reporting requirements
- Minimum fines and penalties

Required to be put into law mid-2024 (*Wbni*)

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Additional Sectors + their Supply Chains

NIS2

NIS

- 🩺 Healthcare
- 🚚 Transport
- 💶 Banking & FMI
- 📡 Digital Infrastructure
- 💧 Water Supply
- ⚡ Energy
- ☁️ Digital Services

- 🔬 Manufacturing (eg. medical)
- 🚀 Space
- 📫 Postal Services
- 🍽️ Food
- 🍺 Waste Water
- ☎️ Communication Services
- 👥 Social Networks
- 🏢 Datacenter Services
- 👩‍💼 Public Administration