

Help! My mobile devices have left the building!

Enforcing acceptable use for your users

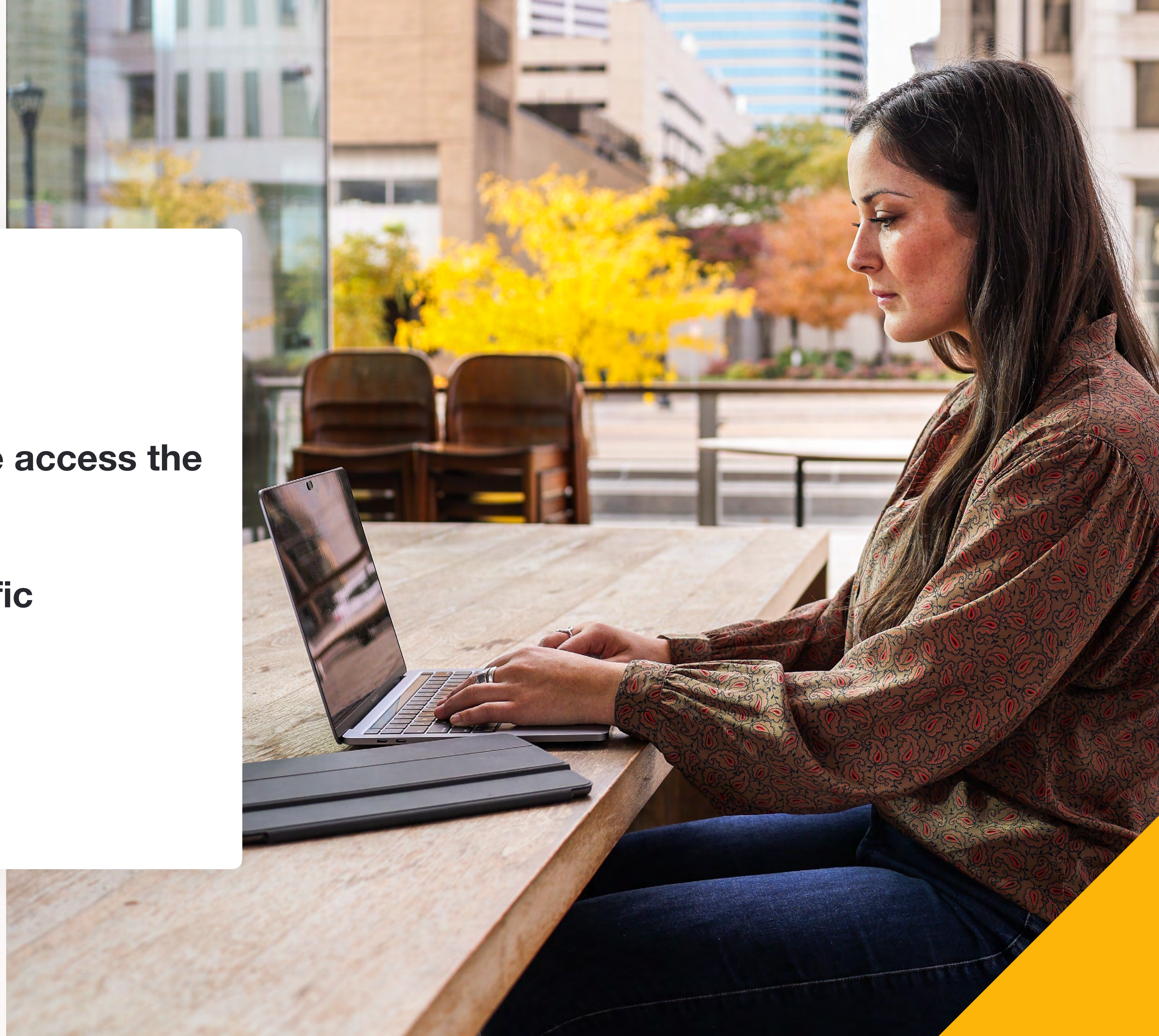


Chris Deane

Security Sales Engineer
Jamf

Agenda

- 1 | What is DNS?
- 2 | How does my device access the internet?
- 3 | The evolution of traffic vectoring and ODCF
- 4 | Demos



**The term firewall originally referred to a wall intended to
confine a fire within a line of adjacent buildings**



What is DNS?

The Domain Name System (DNS) is the phonebook of the Internet. Humans access information online through domain names, like eurosport.com or jamf.com. Web browsers interact through Internet Protocol (IP) addresses. DNS translates domain names to IP addresses so browsers can load Internet resources.



How does DNS work?

DNS
recursor



Root
nameserver



TLD
nameserver



Authoritative
nameserver



How does DNS work?

DNS
recursor



Root
nameserver



TLD
Nameserver



Authoritative
Nameserver



What is DNS? Introduction
with Amazon



**So, how does web
traffic leave my
device?**

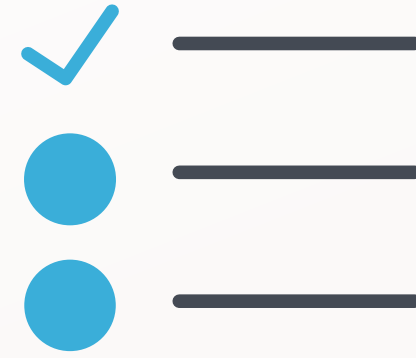
iPad or iOS device



Browser



Device DNS query



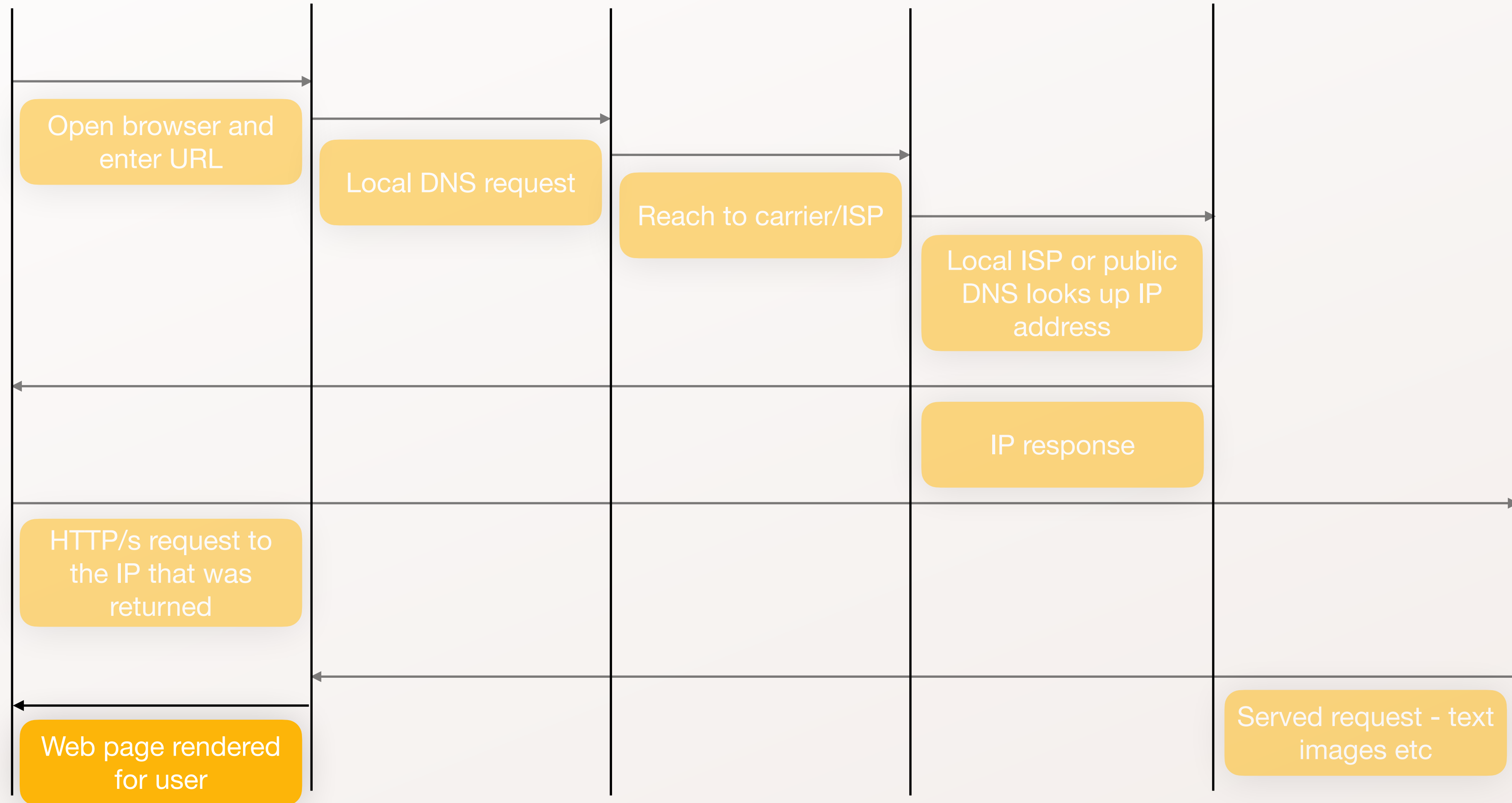
ISP



DNS server



Web server



Why send device traffic to Jamf?



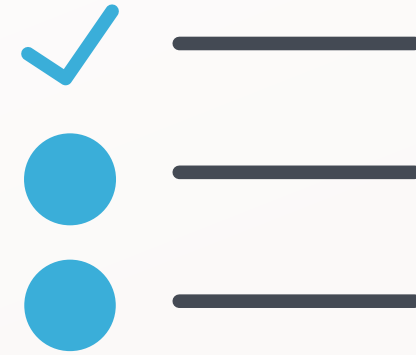
iPad or iOS device



Browser



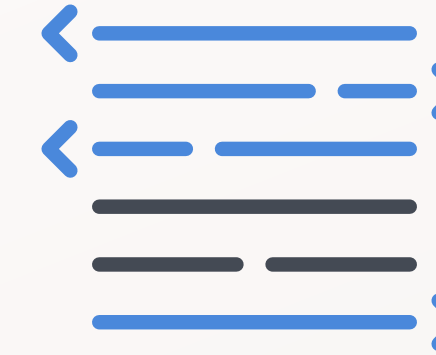
Device DNS query



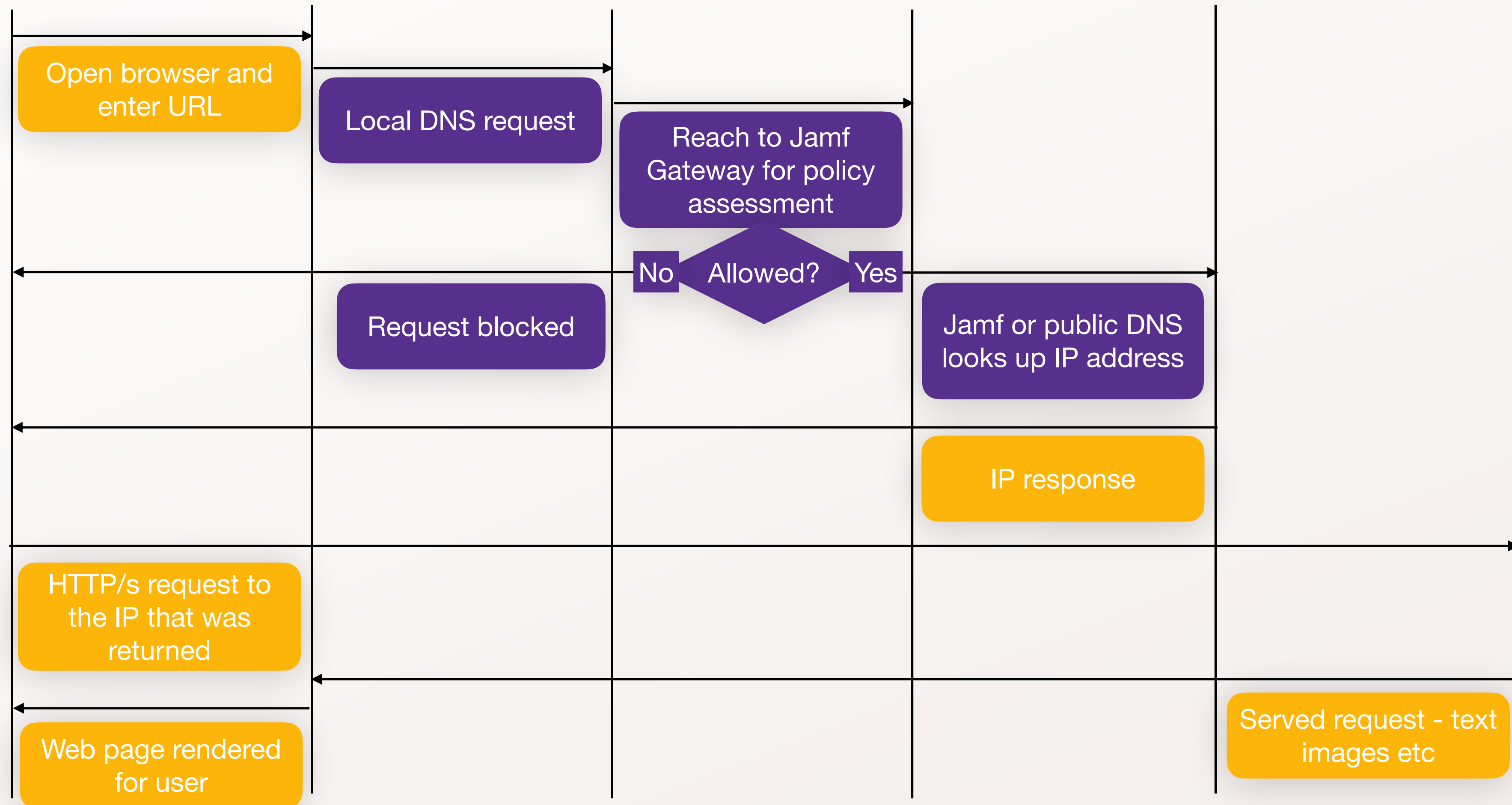
Jamf Gateway



DNS server



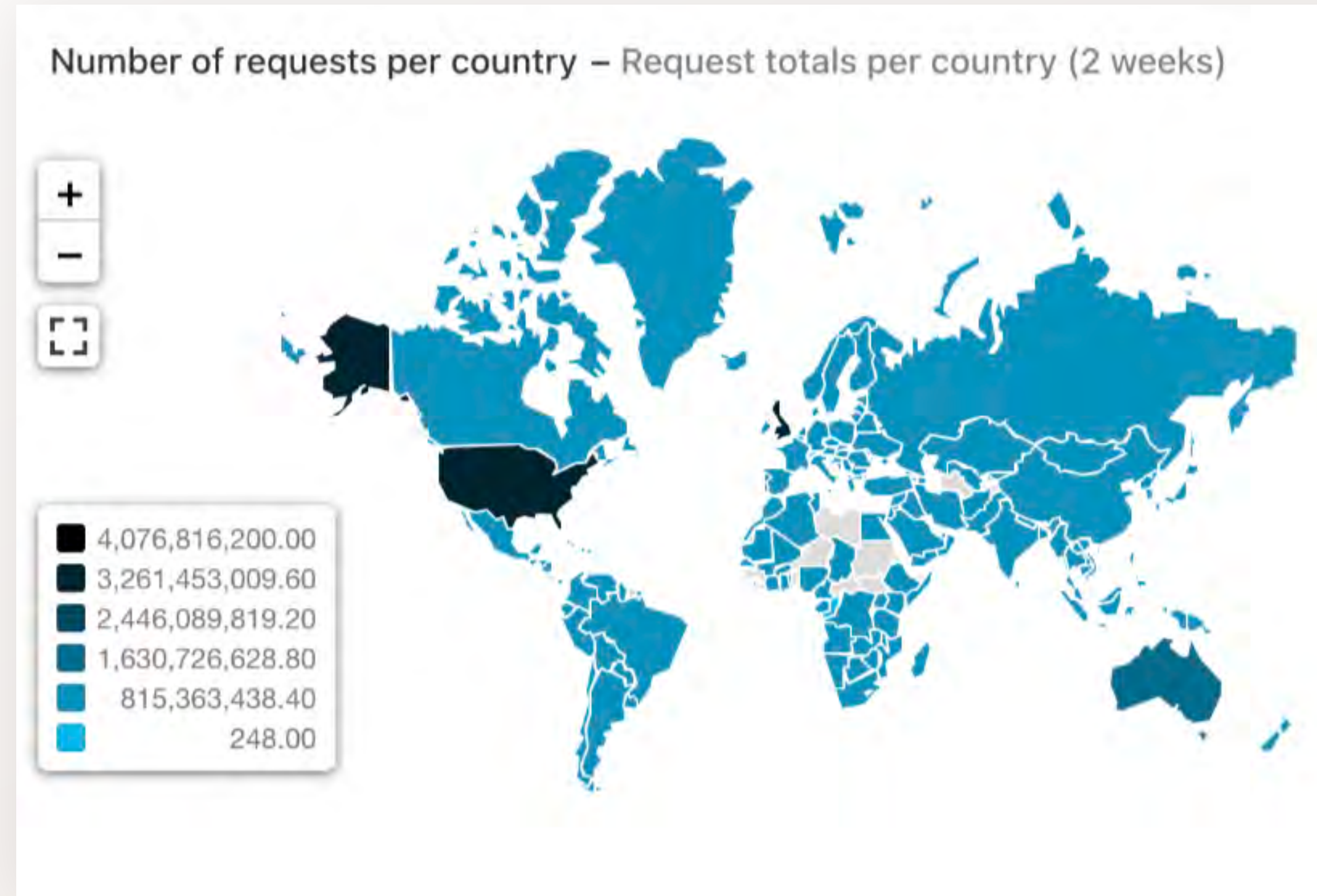
Web server



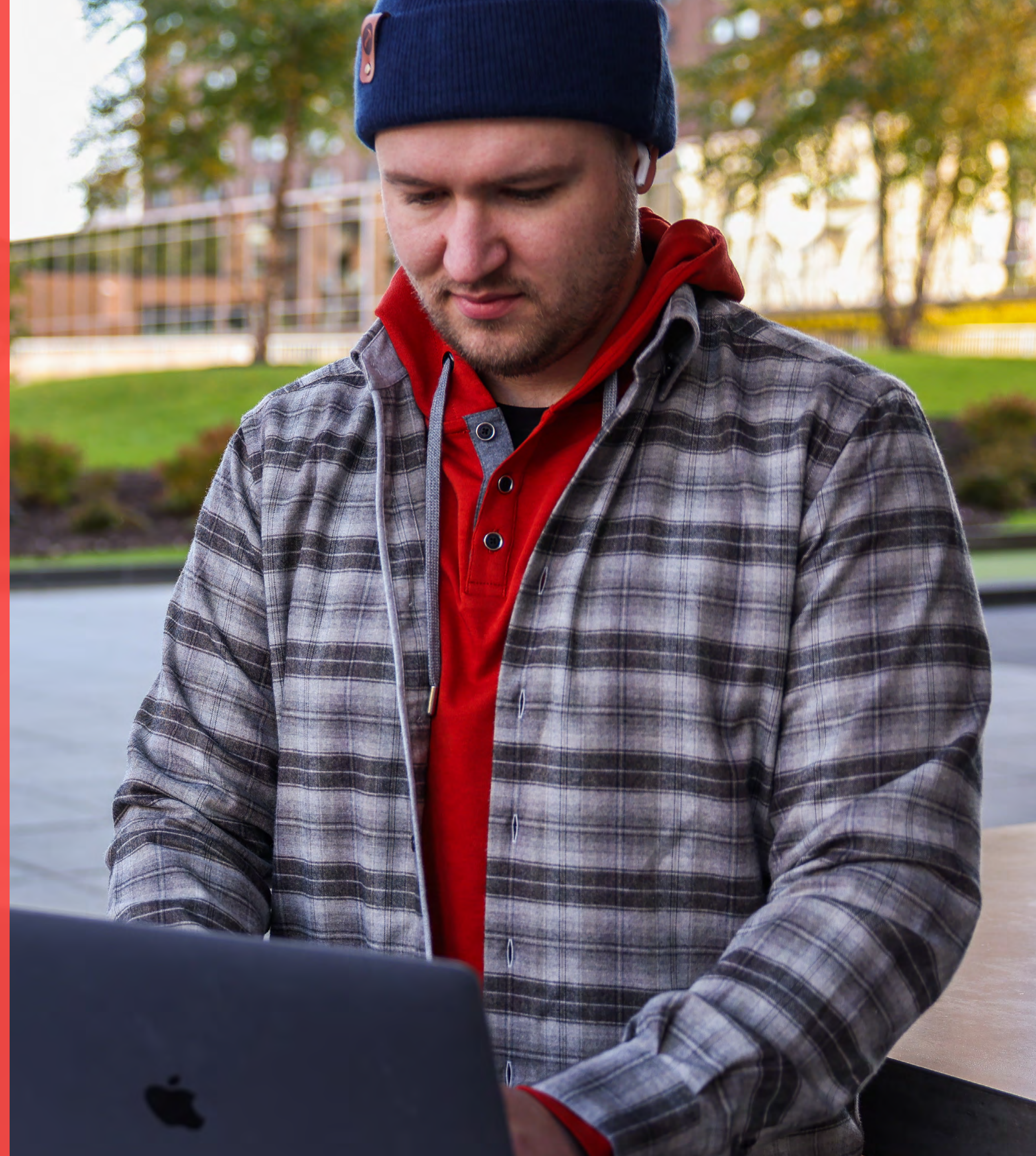
Reasons to enforce acceptable use

Know by whom, when and where devices, apps and resources are being accessed.

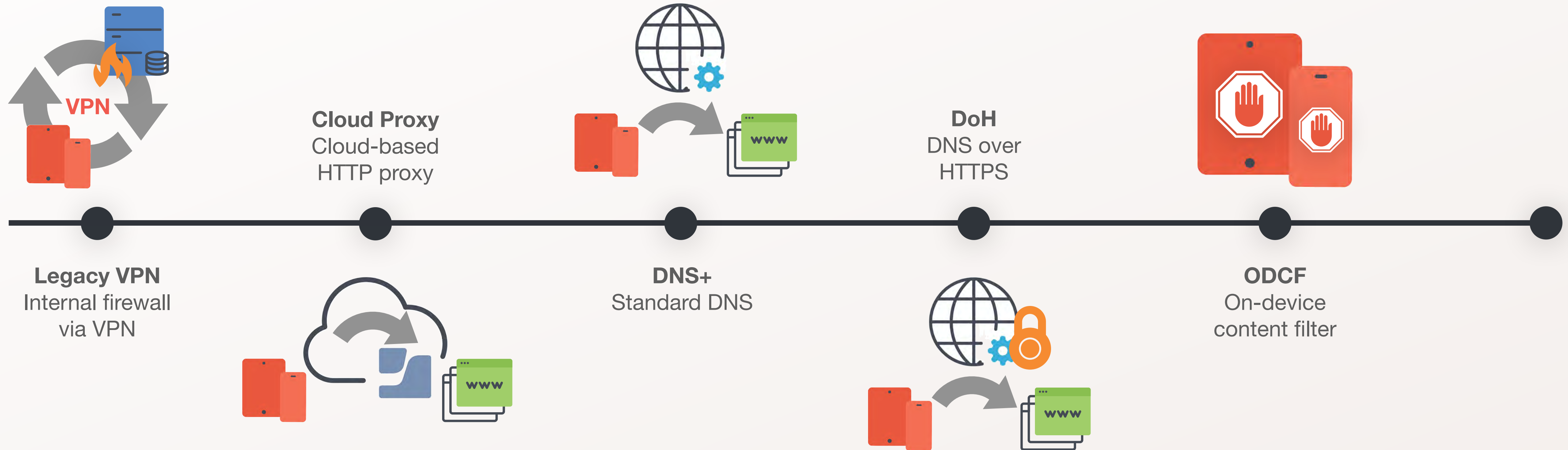
- Privacy
- User Safety
- Productivity
- Cost control
- Phishing/web threats



The evolution of traffic vectoring



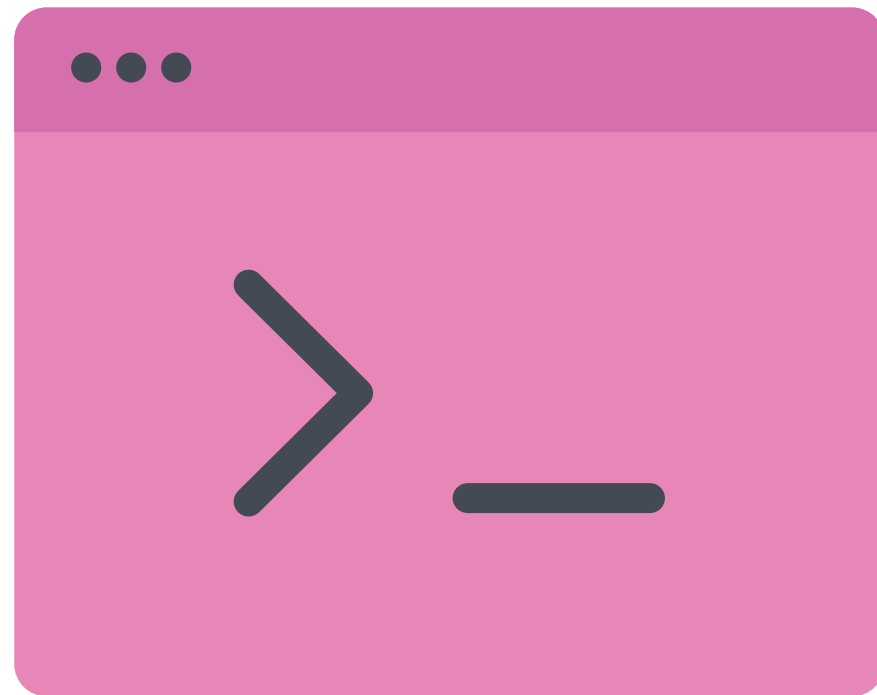
The evolution of traffic vectoring



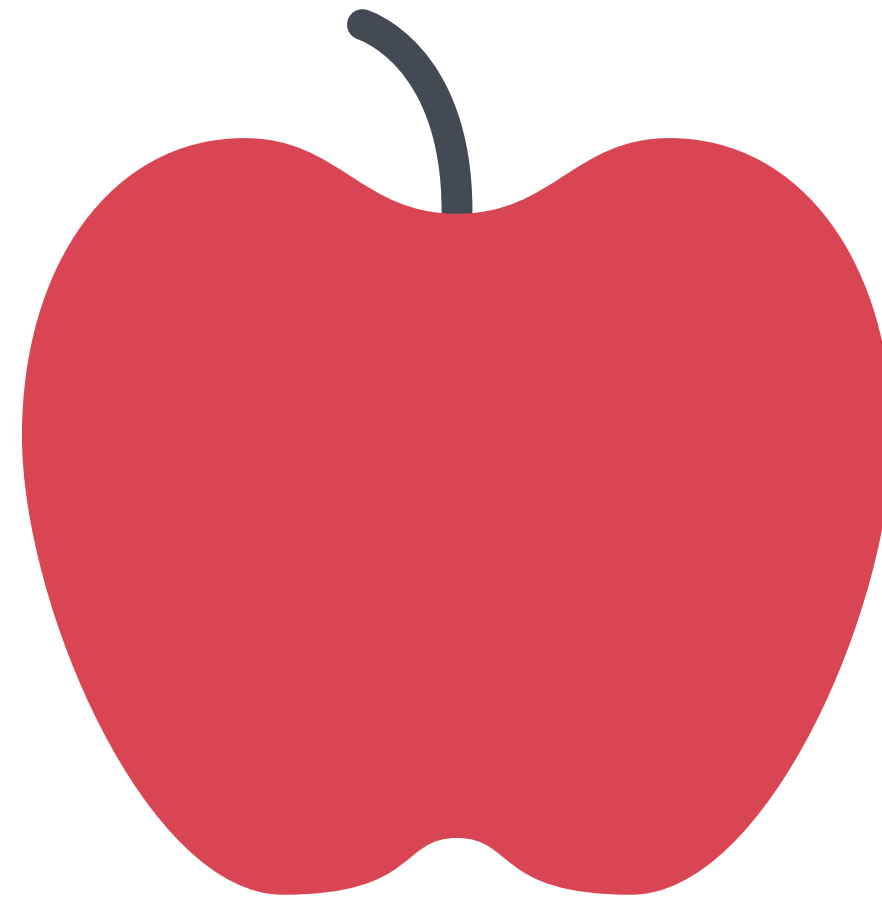
What's so cool about ODCF?

ODCF

More powerful



Apple-native



Privacy preserving



More powerful



On Device Evaluations



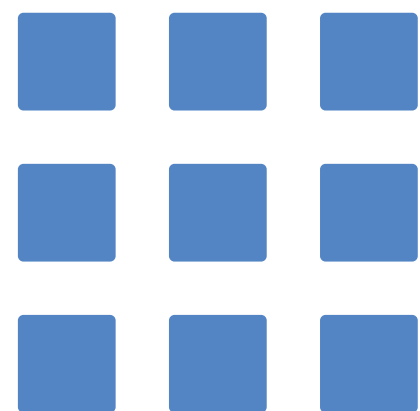
Network Stack



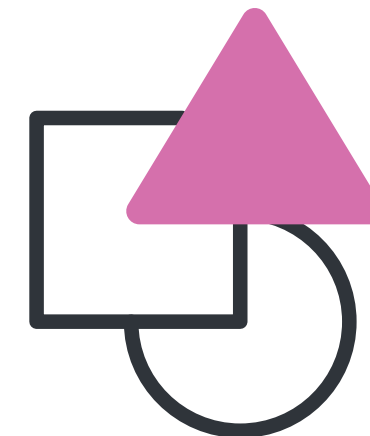
URL Blocking



IP Address Blocking

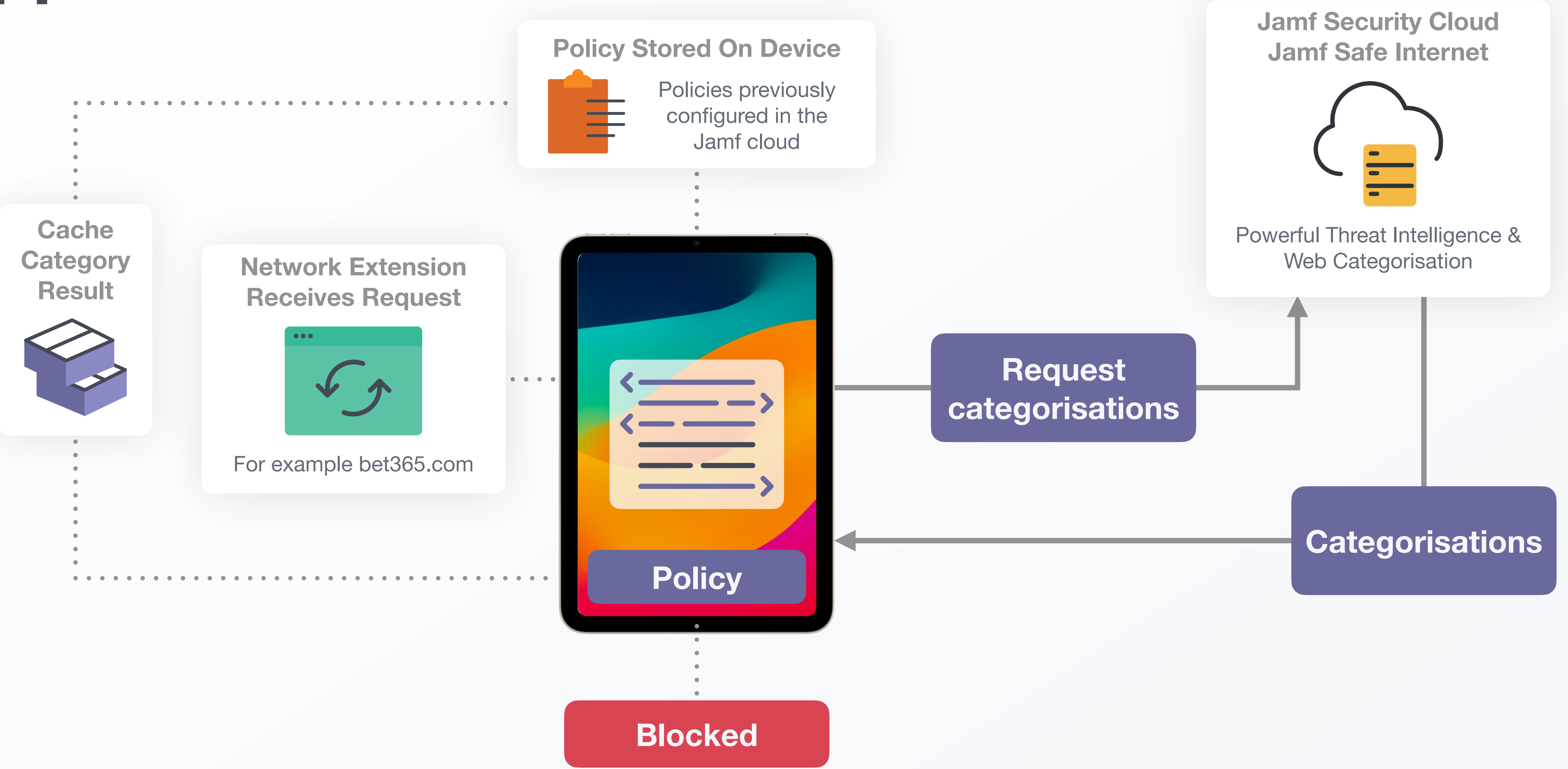


App Blocking via
bundle ID



Additional Features

Apple-native



Privacy preserving



Benefits of combining ODCF with DoH

ODCF + DoH

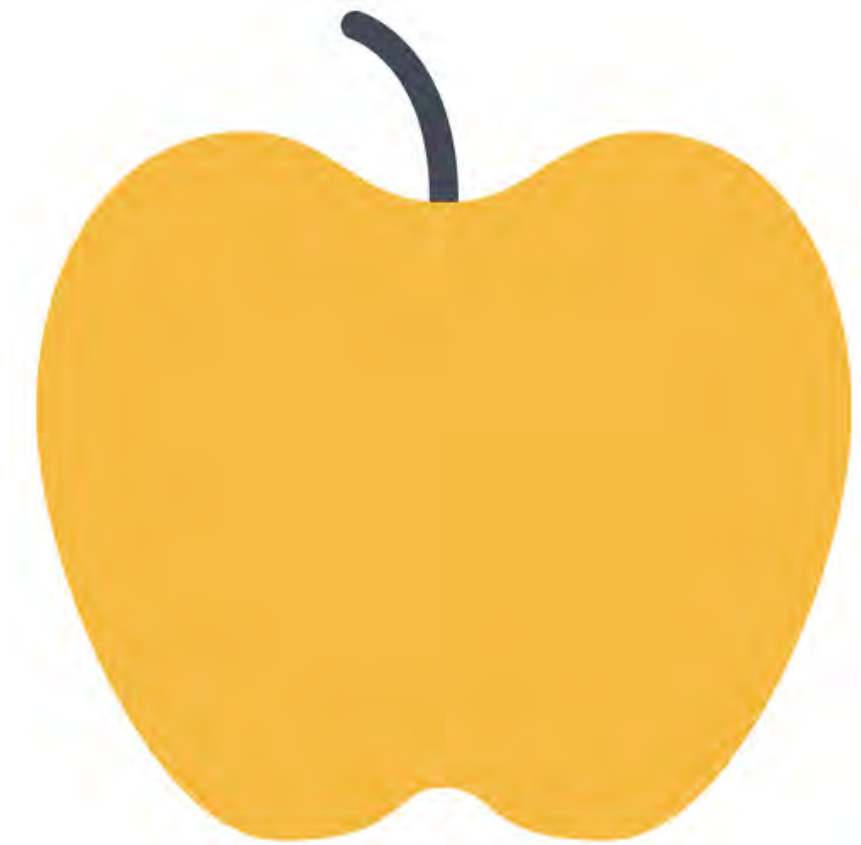
Zero day threats



DoH Fallback



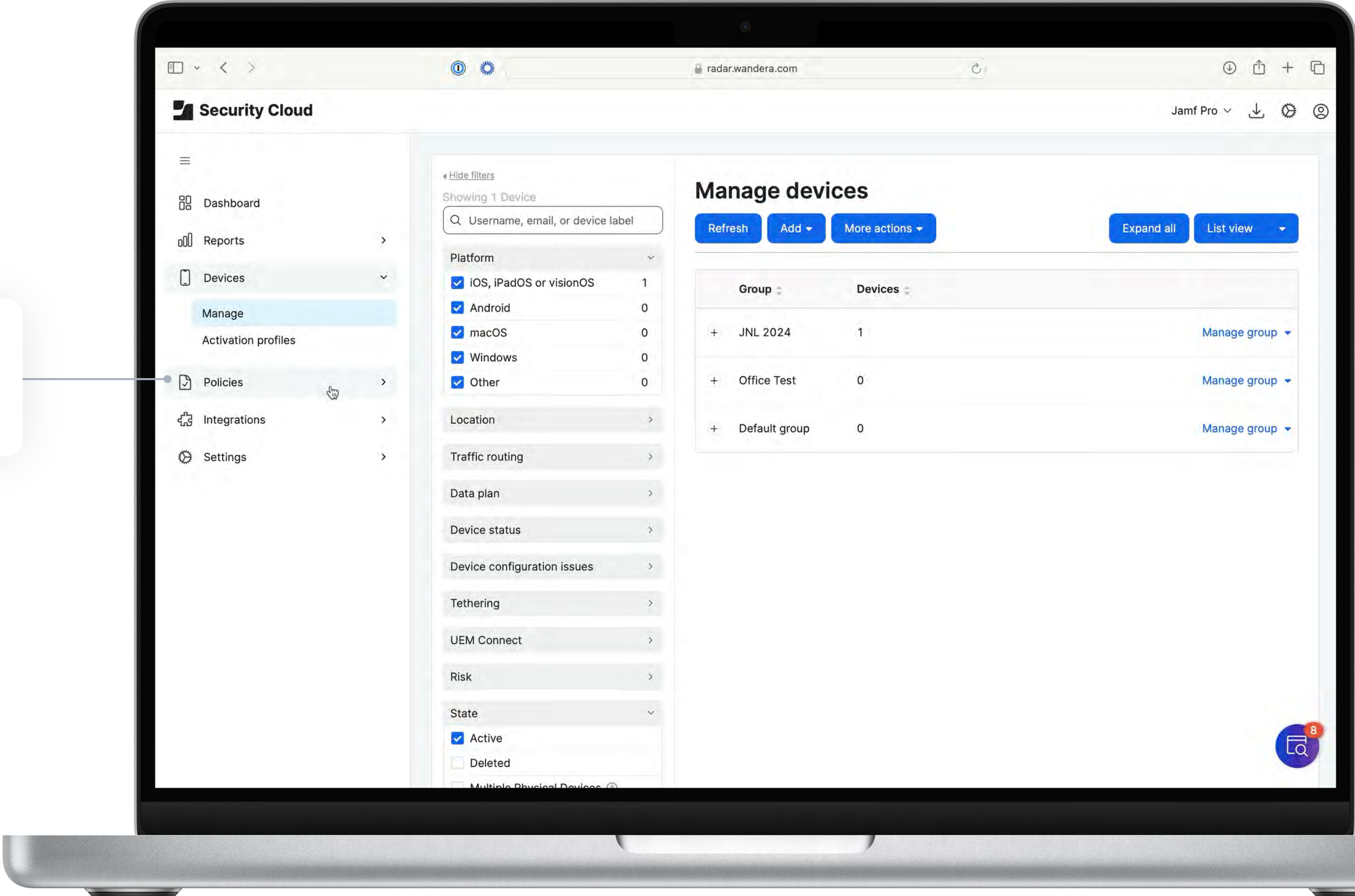
Safe Search



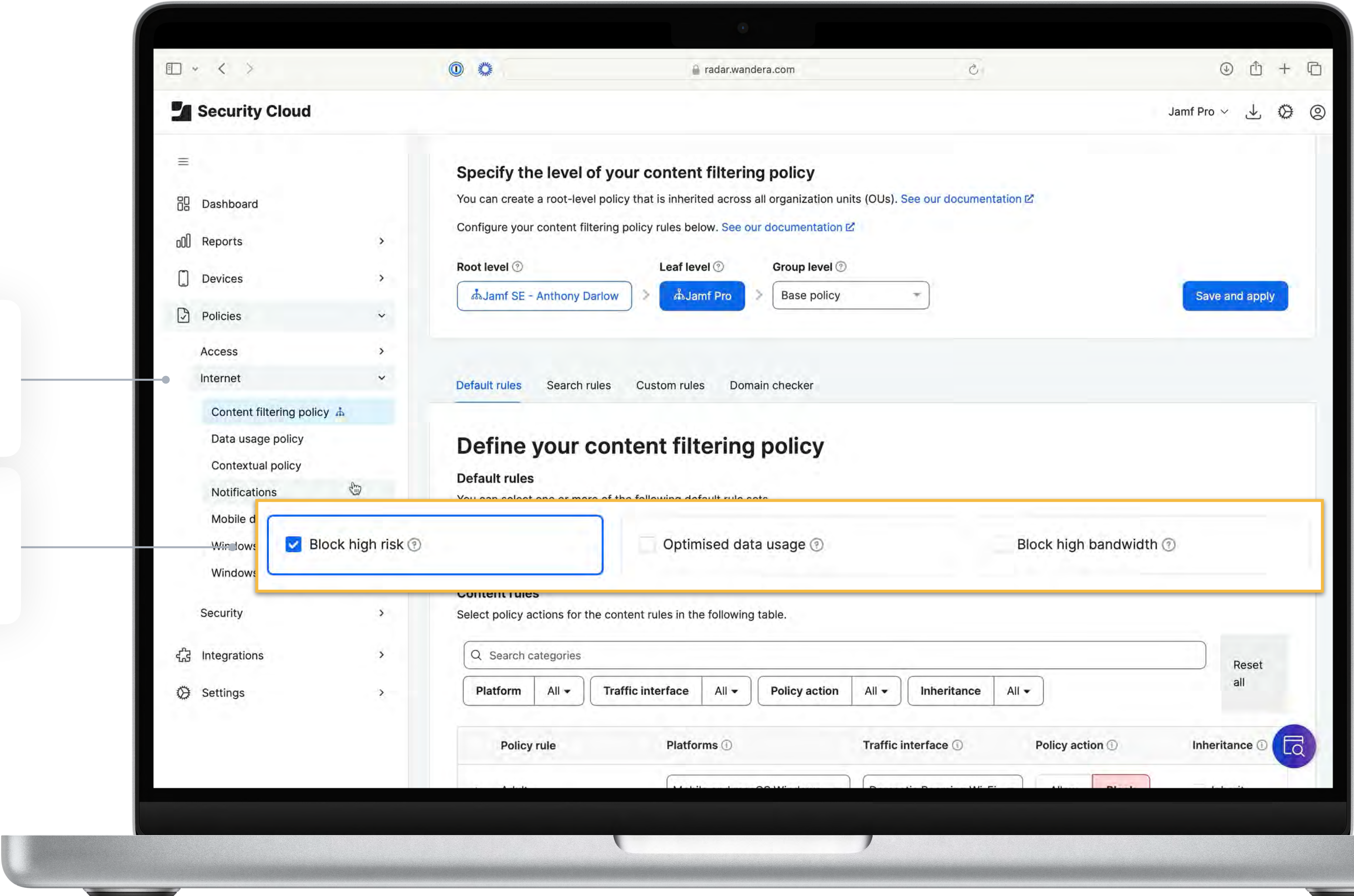
JSC console and network interface blocking

Creating Policy

Content Policies
Content Filtering Policies are created within the Jamf Security Cloud Console



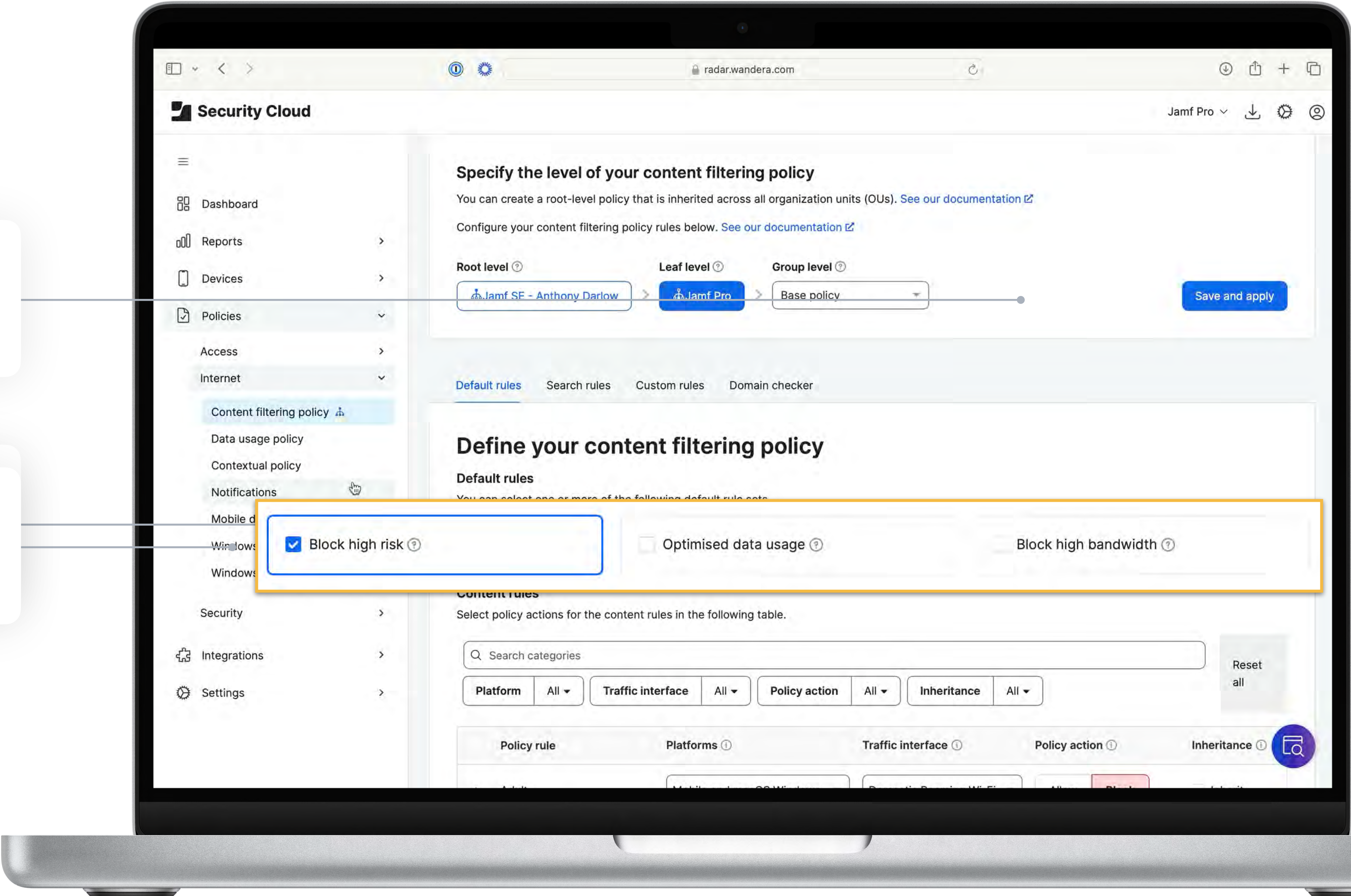
Creating Policy



Content Policies
Content Filtering Policies are created within the Jamf Security Cloud Console

Simple Presets
Create policy quickly and easily with the preset rules

Creating Policy



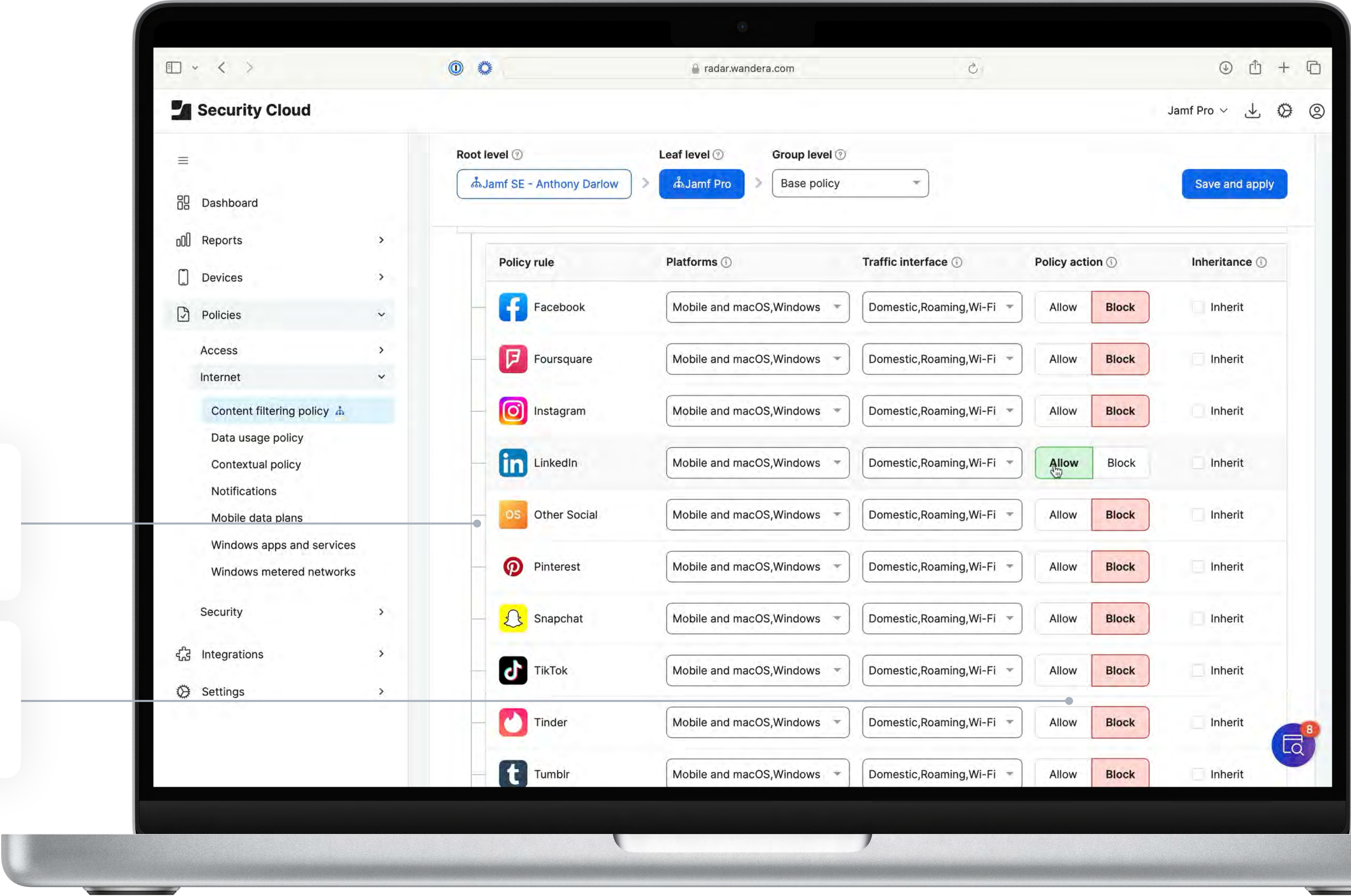
Allow or Block

Simply use the Allow or Block buttons on categories to build policy

Simple Presets

Create policy quickly and easily with the preset rules

Creating Policy



Sub Categories

Be more granular by blocking a category while allowing a certain service

Alternatively...

Allow a category while blocking certain services

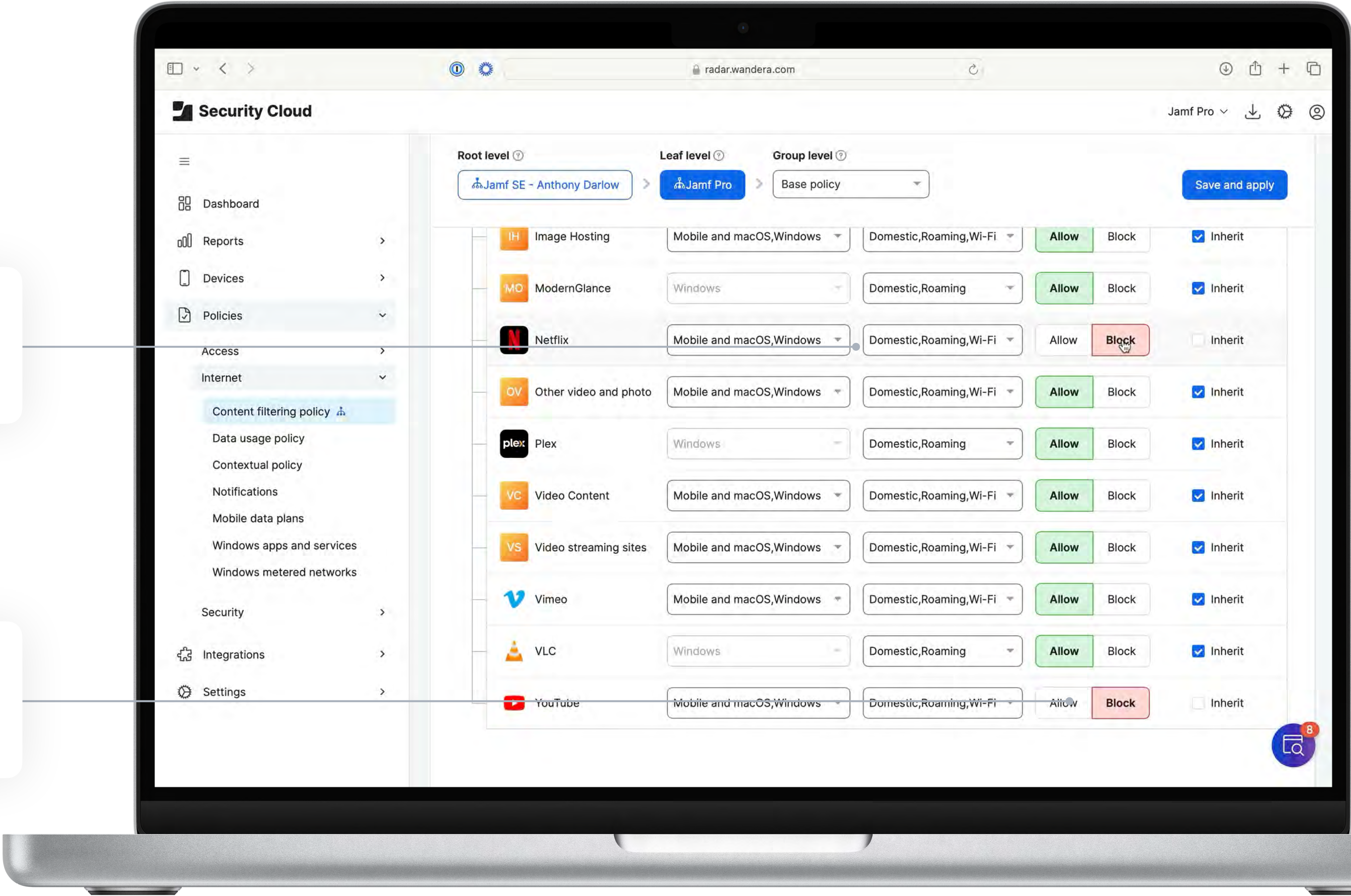
Creating Policy

Set Rules Depending Network

Allow or block categories based on the network interface of the device

Alternatively...

Allow a category while blocking certain services



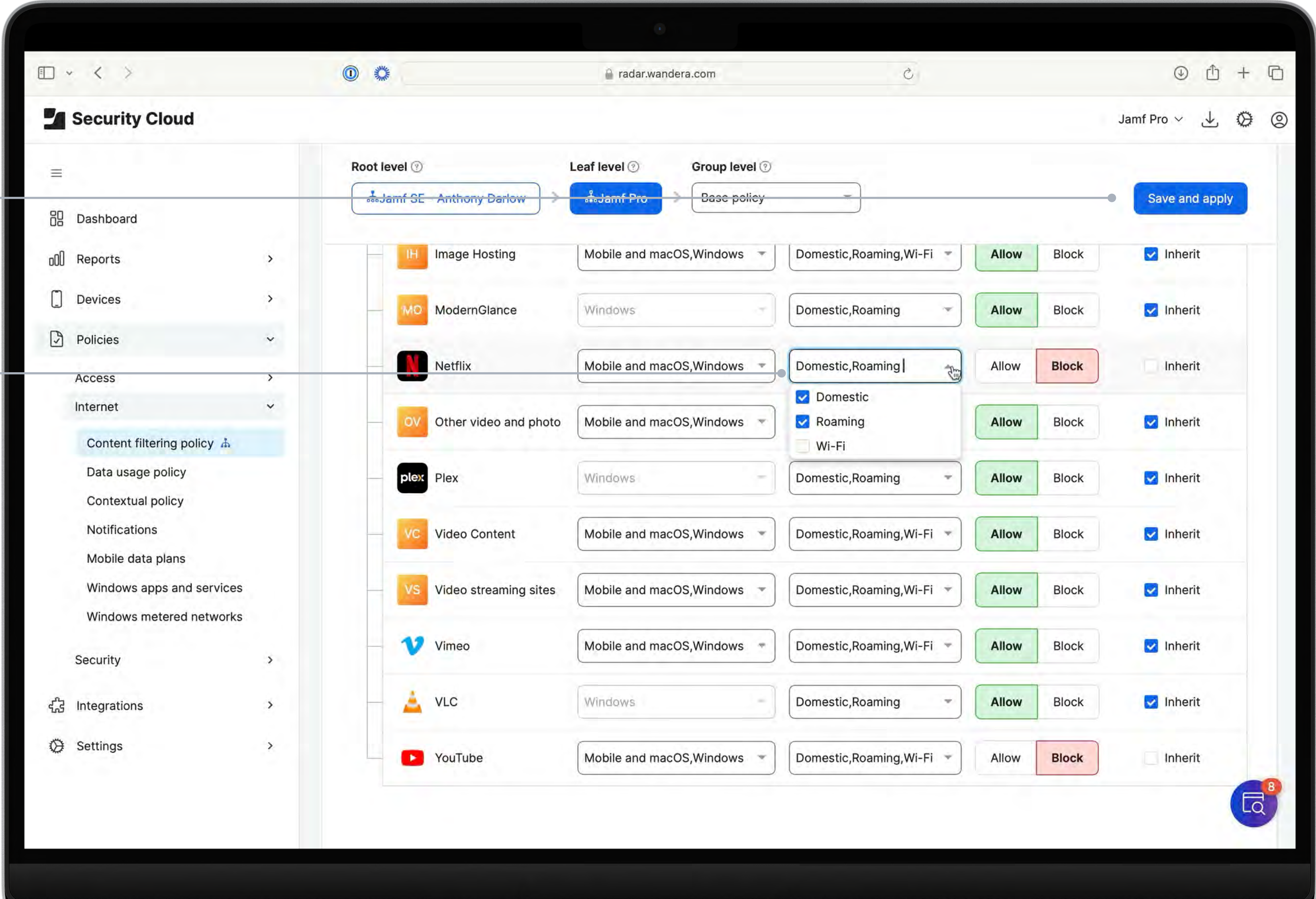
Creating Policy

Remember to Save!

New policy rules do not take place until you've hit "save and apply"

Set Rules Depending Network

Allow or block categories based on the network interface of the device?



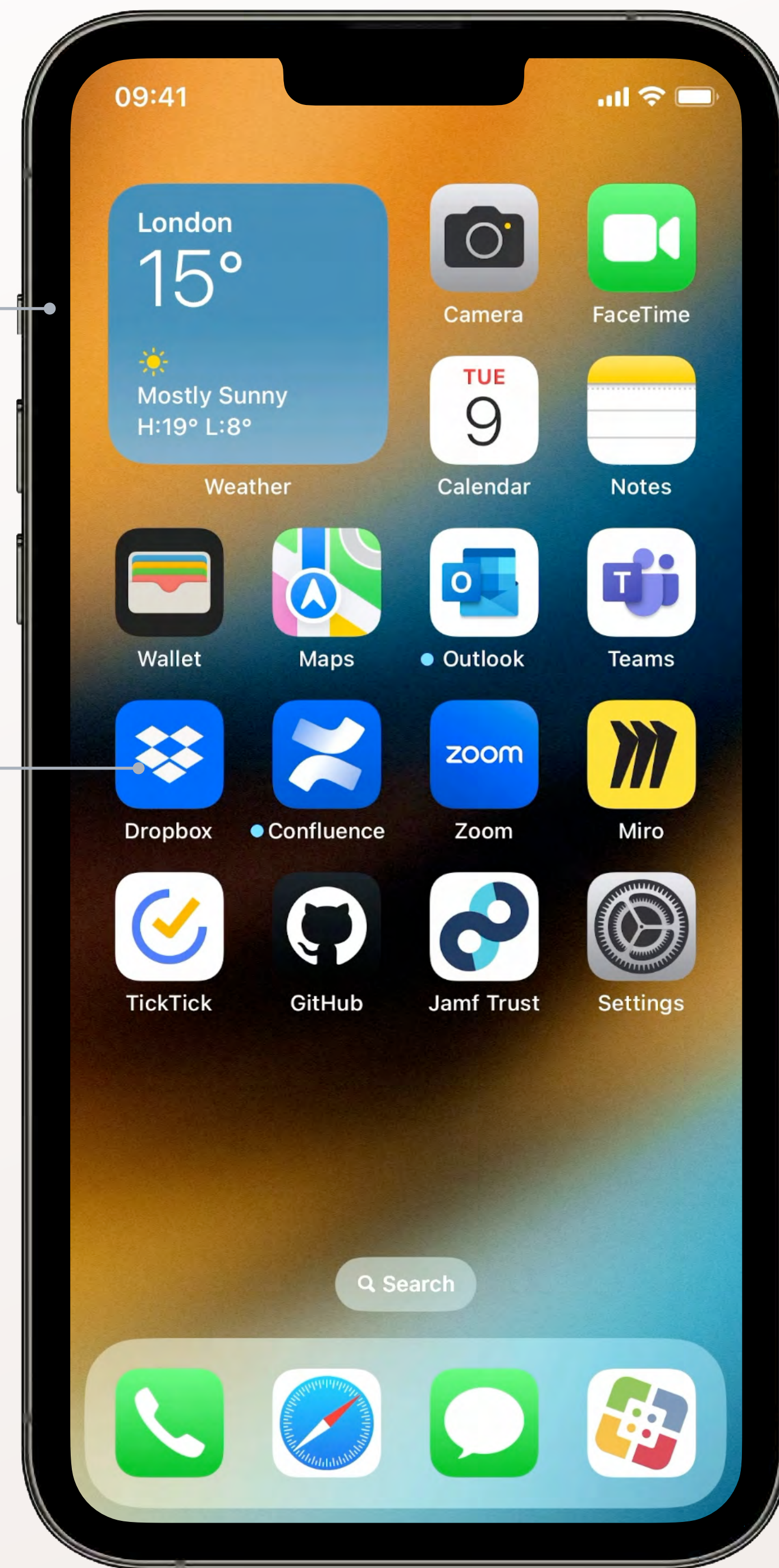
Acceptable Use

Phone using Cellular Data

The user of the phone wants to use Netflix but is not on WiFi

Content Policy

The Content Filtering Policy is applied based on a combination of content and network interface



Acceptable Use

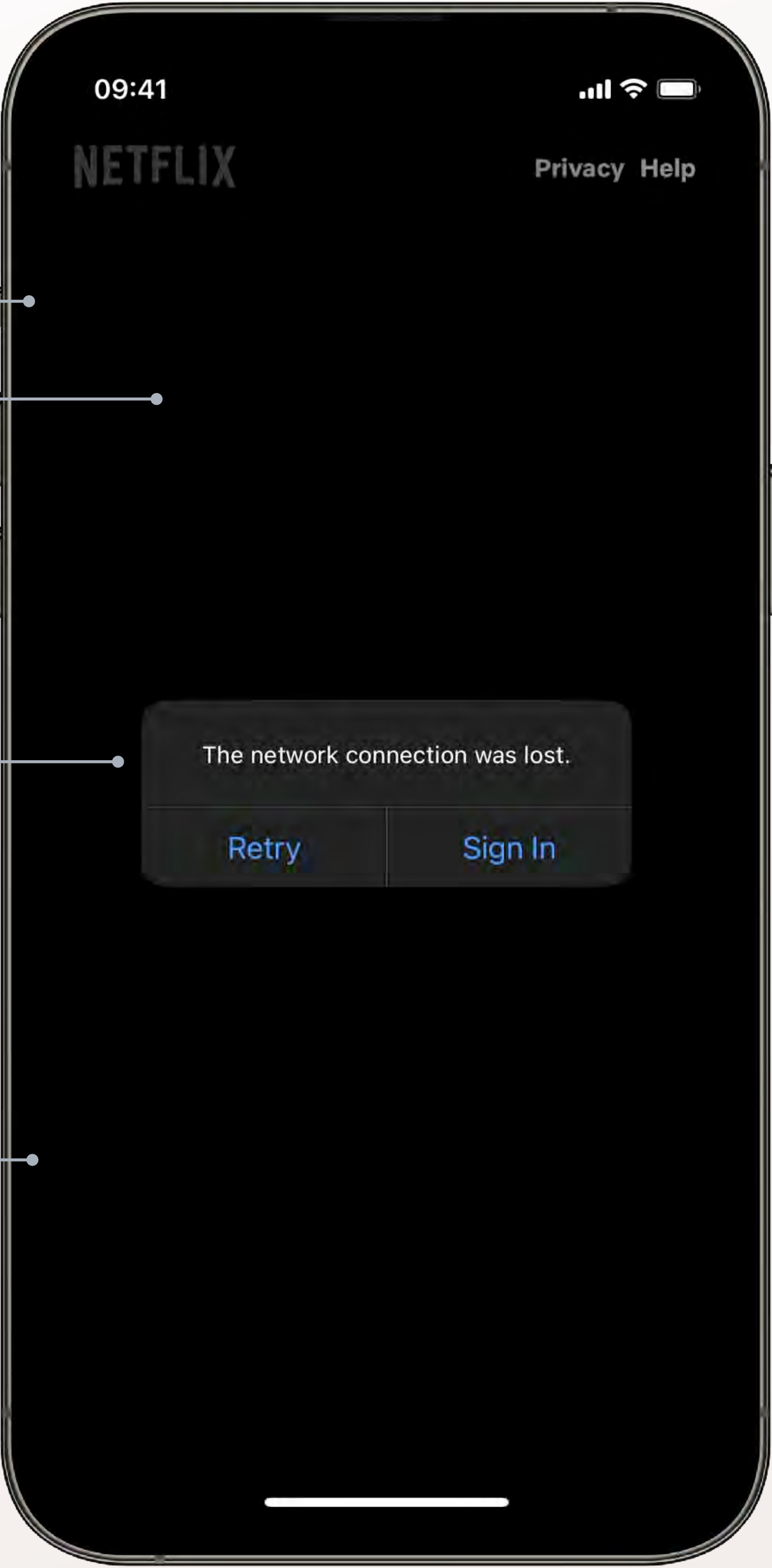
Phone using Cellular Data

Content Policy
Regardless using app or browser, as the device is still not on WiFi, policy is applied

Content Policy
The Content Filtering Policy is applied based on a combination of content and network interface

Netflix via Browser

App not working, attempting to gain access via a web browser instead



Acceptable Use

Content Policy

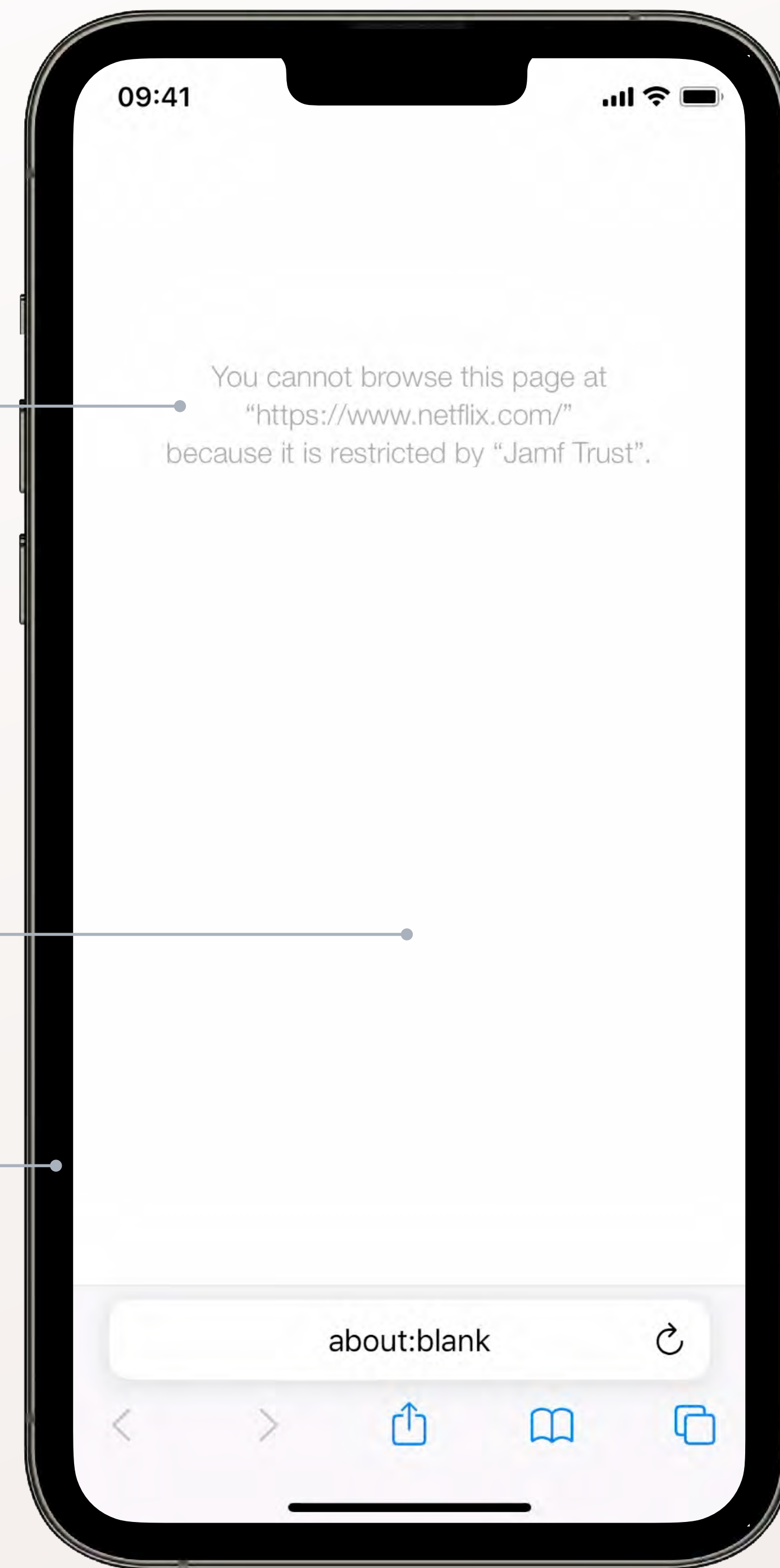
**Regardless using app or browser,
as the device is still not on WiFi,
policy is applied**

Jamf Trust

**The Jamf Trust app is installed to
the device as part of the
deployment**

Netflix via Browser

**App not working, attempting to
gain access via a web browser
instead**



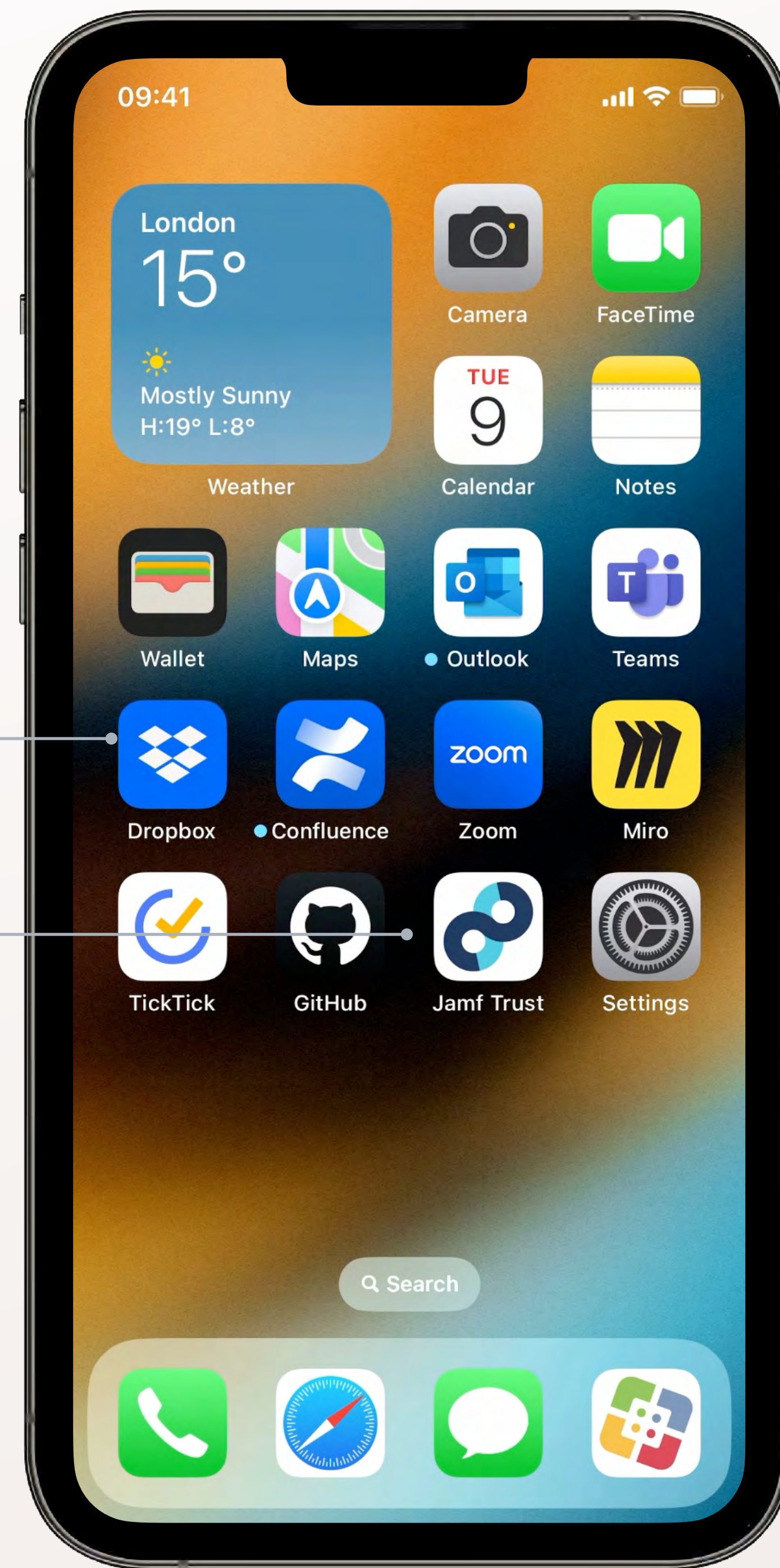
Acceptable Use

View Content Filtering Policy

User can see a difference between blocked on Cellular and WiFi policy

Jamf Trust

The Jamf Trust app is installed to the device as part of the deployment



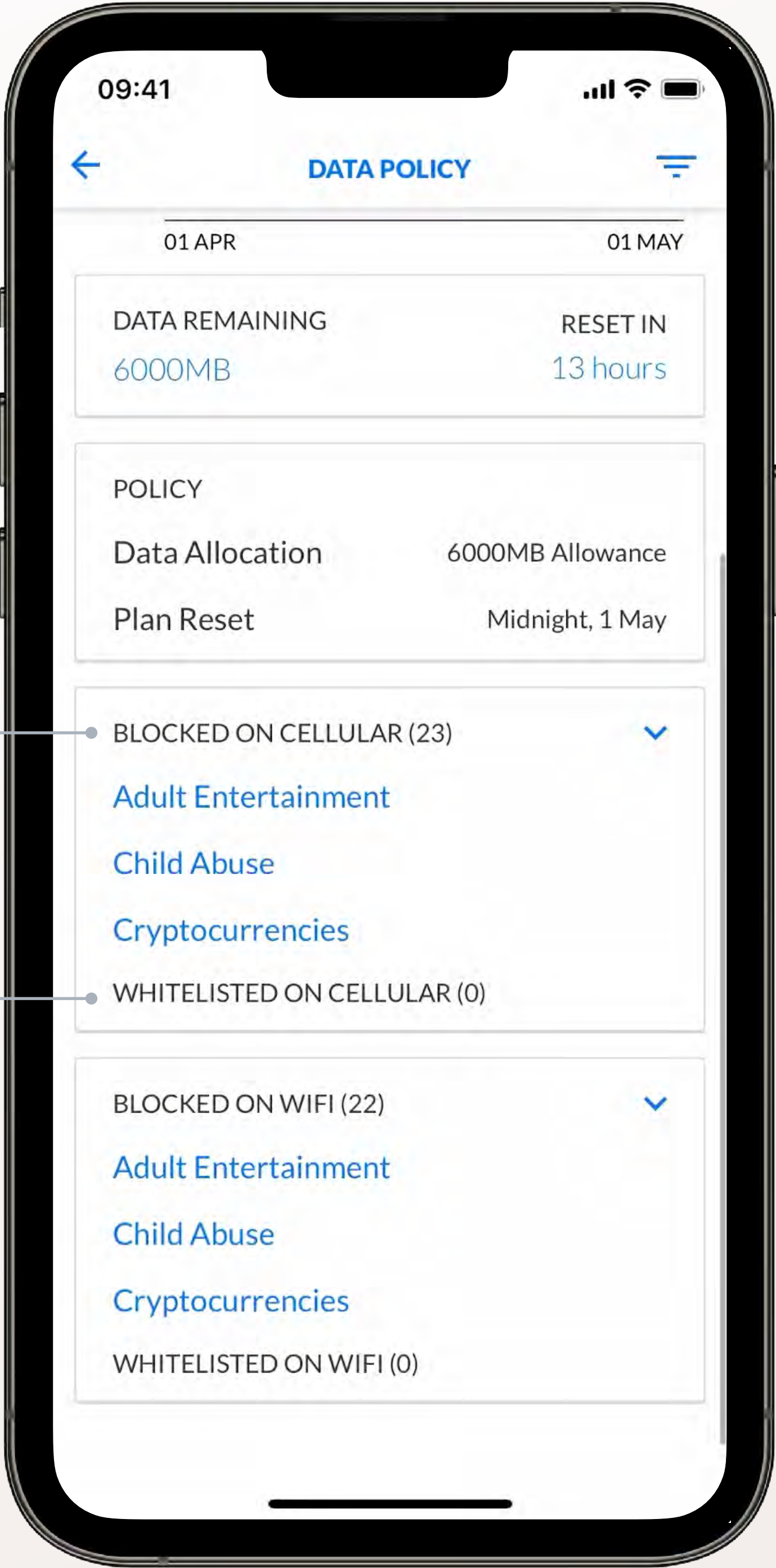
Acceptable Use

View Content Filtering Policy

User can see a difference between blocked on Cellular and WiFi policy

Matches Policy in console

As set in the console by the admin, Netflix is not allowed on a cellular connection



Acceptable Use

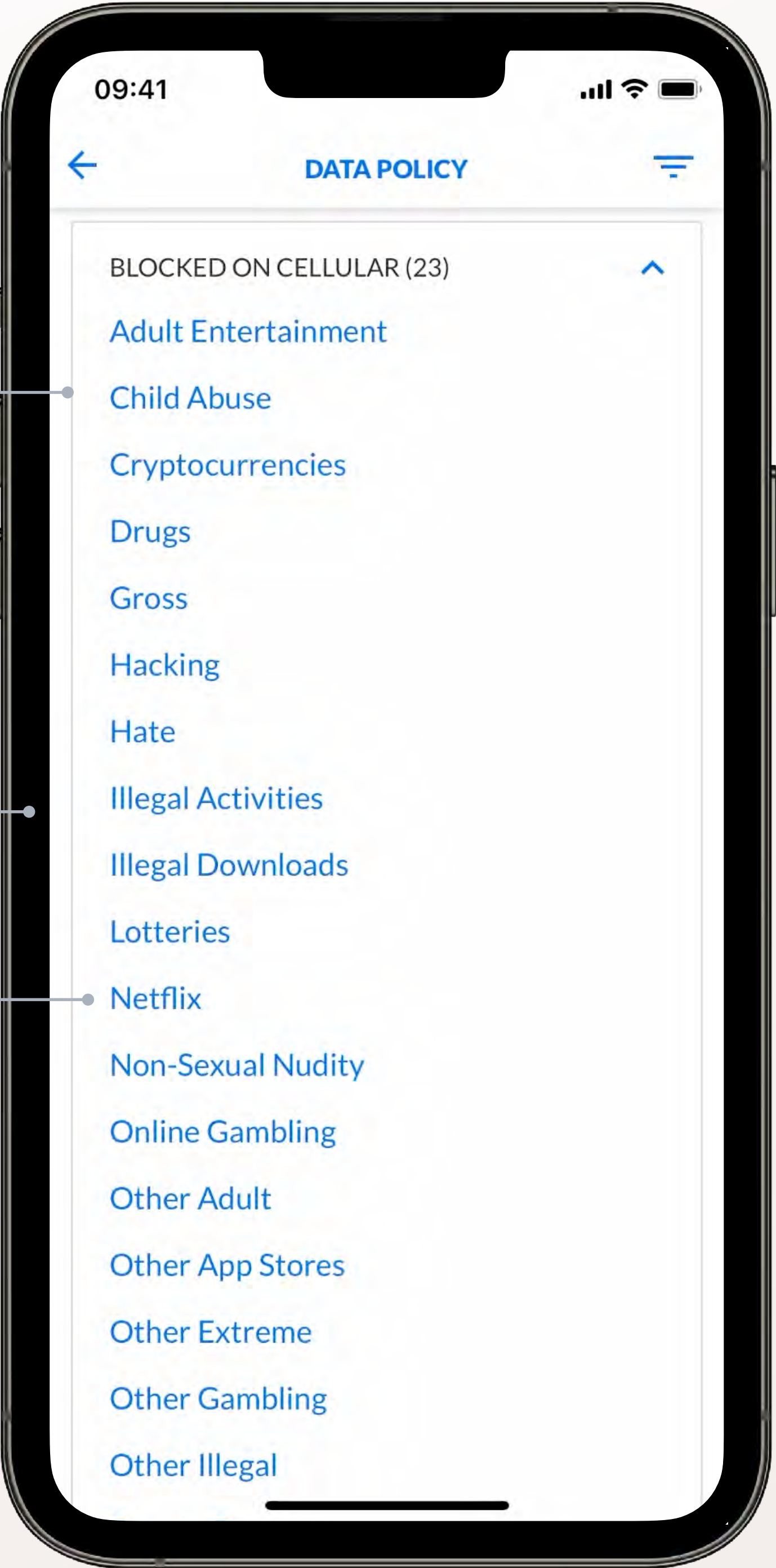
Connect to WiFi

The device is now connected to WiFi and will have a different set of rules for the filtering policy

Change Network Connection

Changing the way the device connects to the network will change filtering policy

As set in the console by the admin, Netflix is not allowed on a cellular connection



Acceptable Use

Connect to WiFi

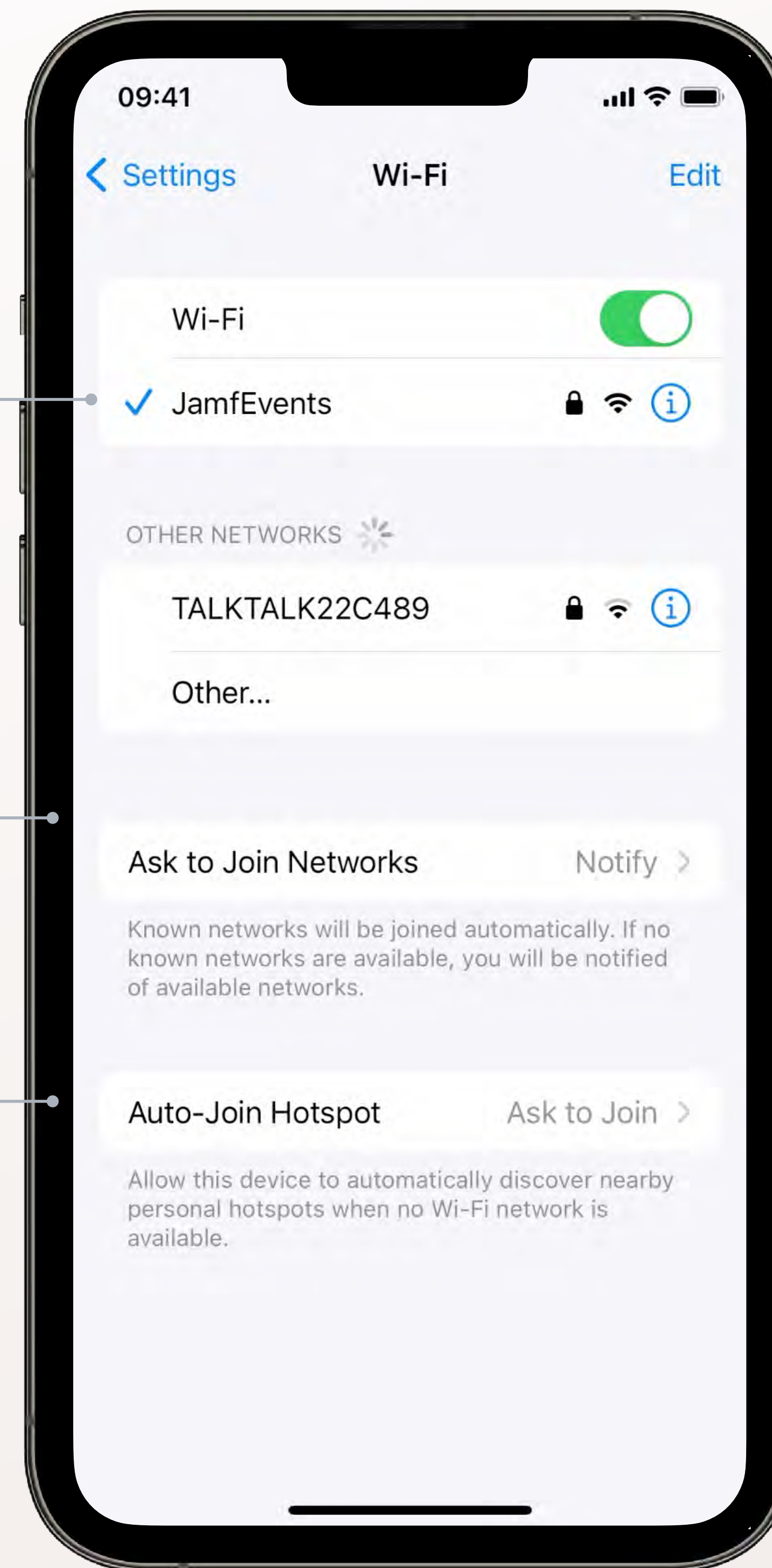
The device is now connected to WiFi and will have a different set of rules for the filtering policy

Change Network Connection

Changing the way the device connects to the network will change filtering policy

Netflix Available via WiFi

Now that the device is on WiFi, the device connects to Netflix as expected



JSI console and web threat rules

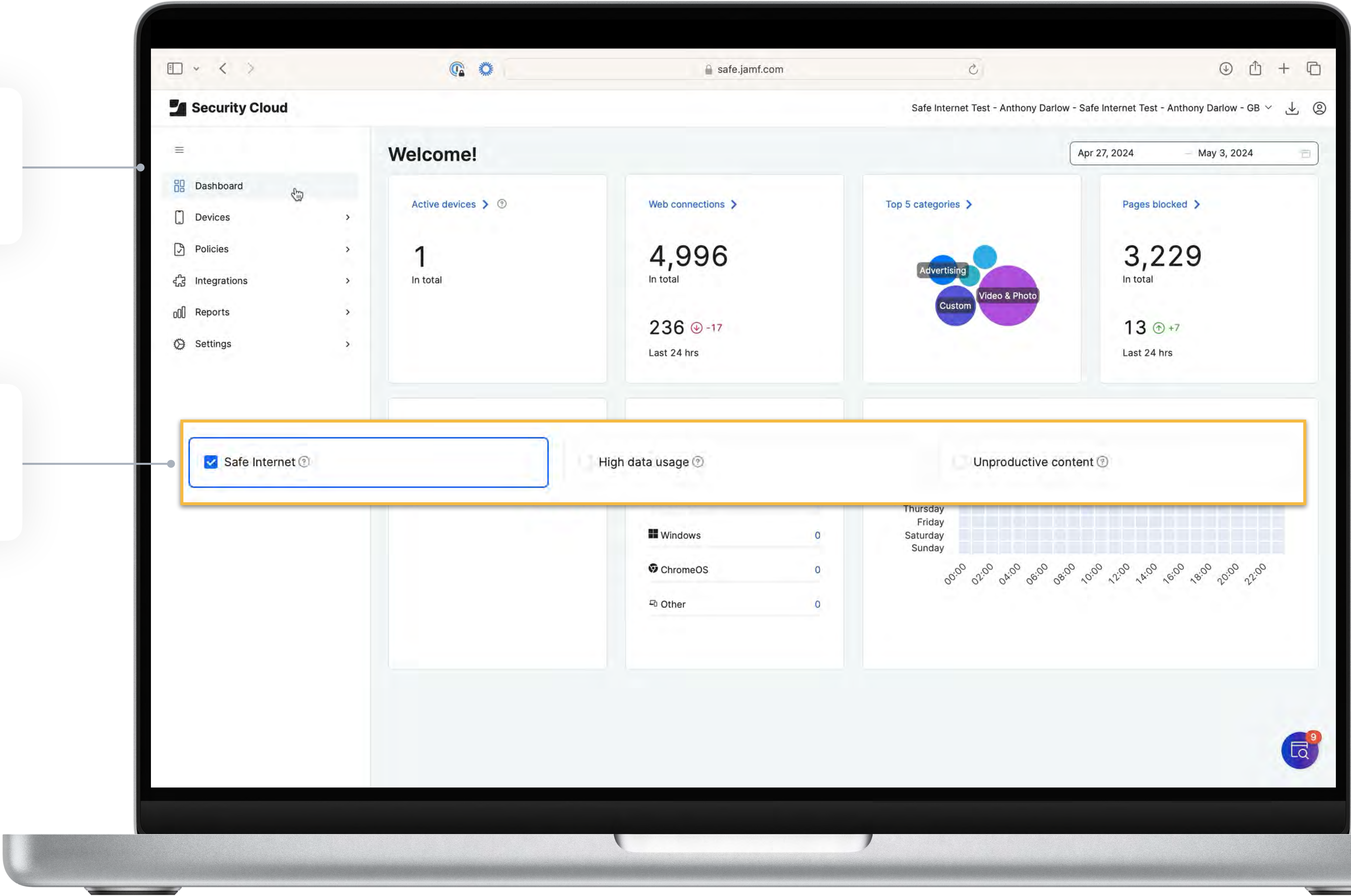
Web Based Threats

Jamf Safe Internet

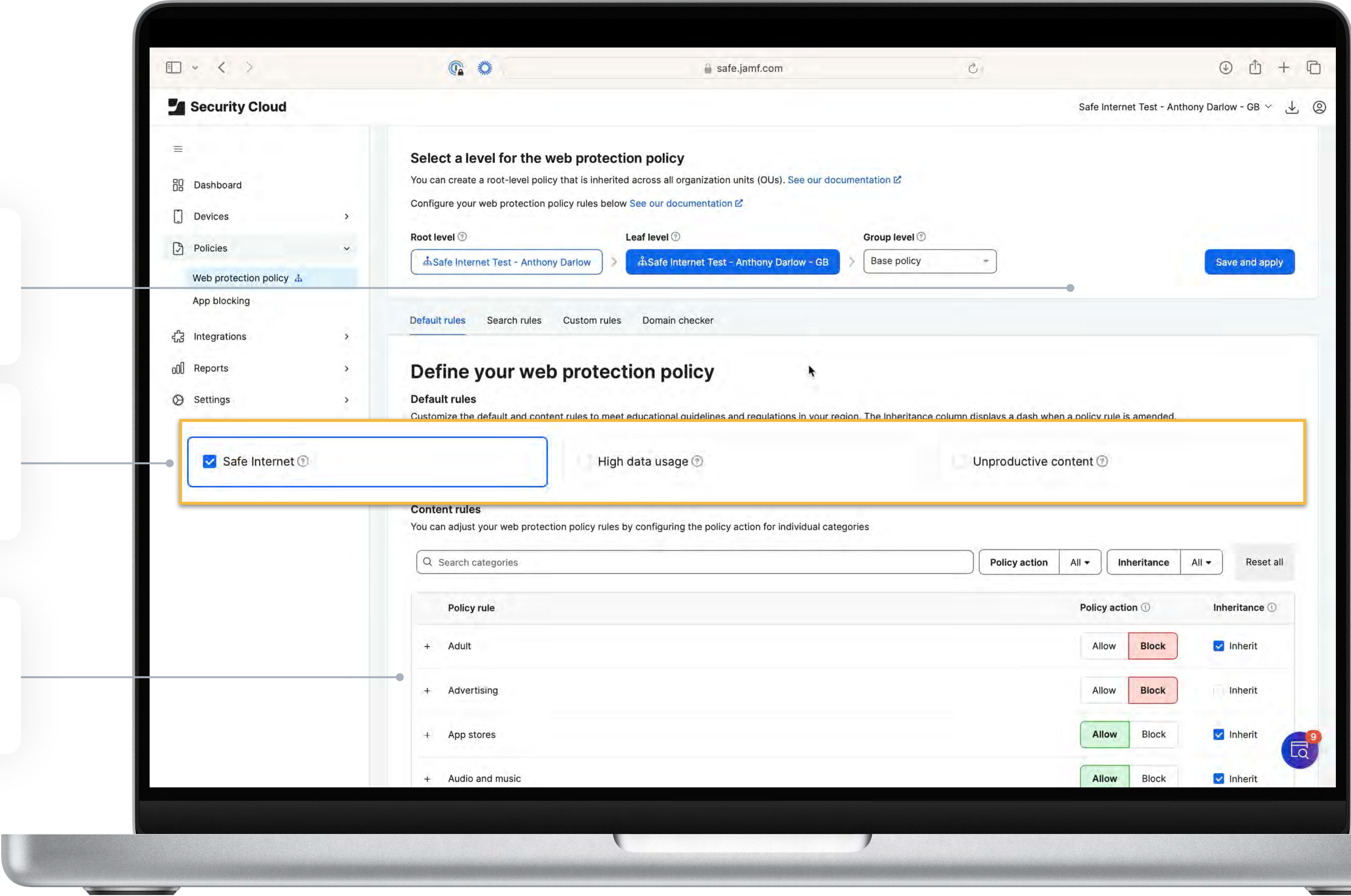
Education specific console with clear views and workflows designed for IT Admins

Simple Presets

Create policy quickly and easily with the education specific presets



Web Based Threats



Allow or Block

Simply use the Allow or Block buttons on categories to build policy

Simple Presets

Create policy quickly and easily with the education specific presets

Web Threat rules

Always on as default protecting users against web based threats such as phishing

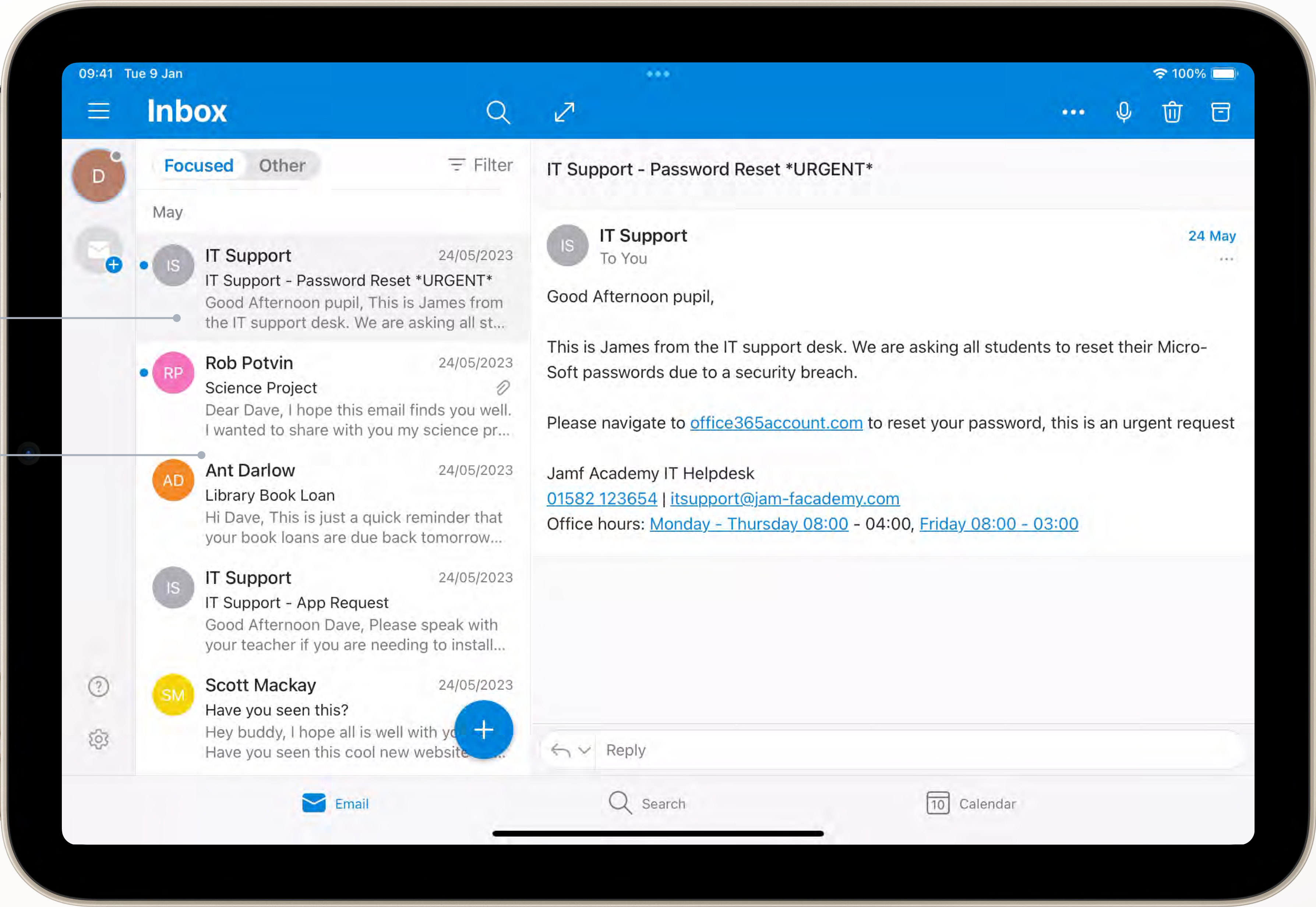
Social Engineering

Email from IT Support

Asking for the student to reset
their Microsoft password



Social Engineering



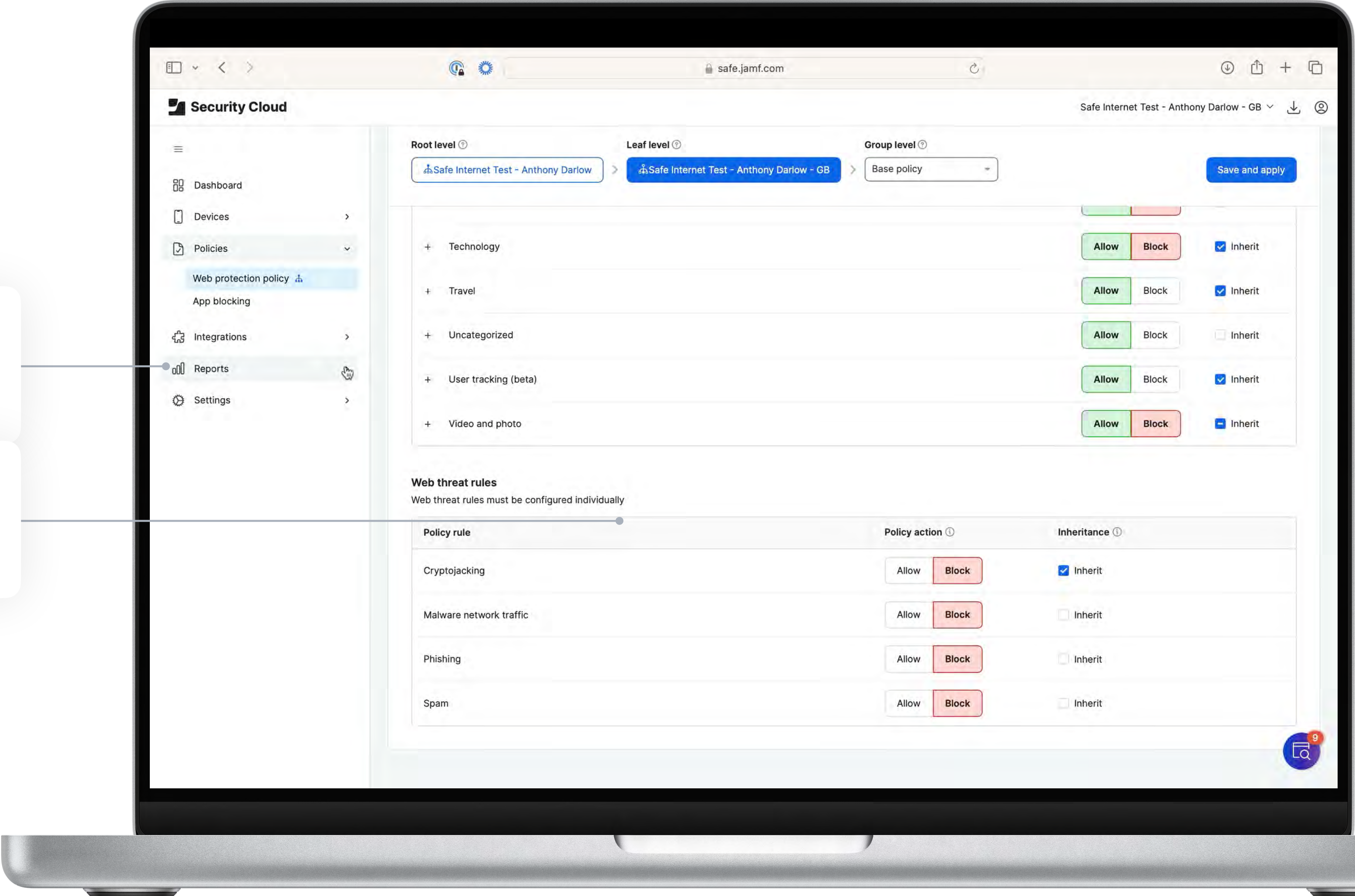
Email from IT Support

Asking for the student to reset their Microsoft password

Web Based Threat Prevention

Protecting students against web-based malware, spam and phishing attacks

Security Reports



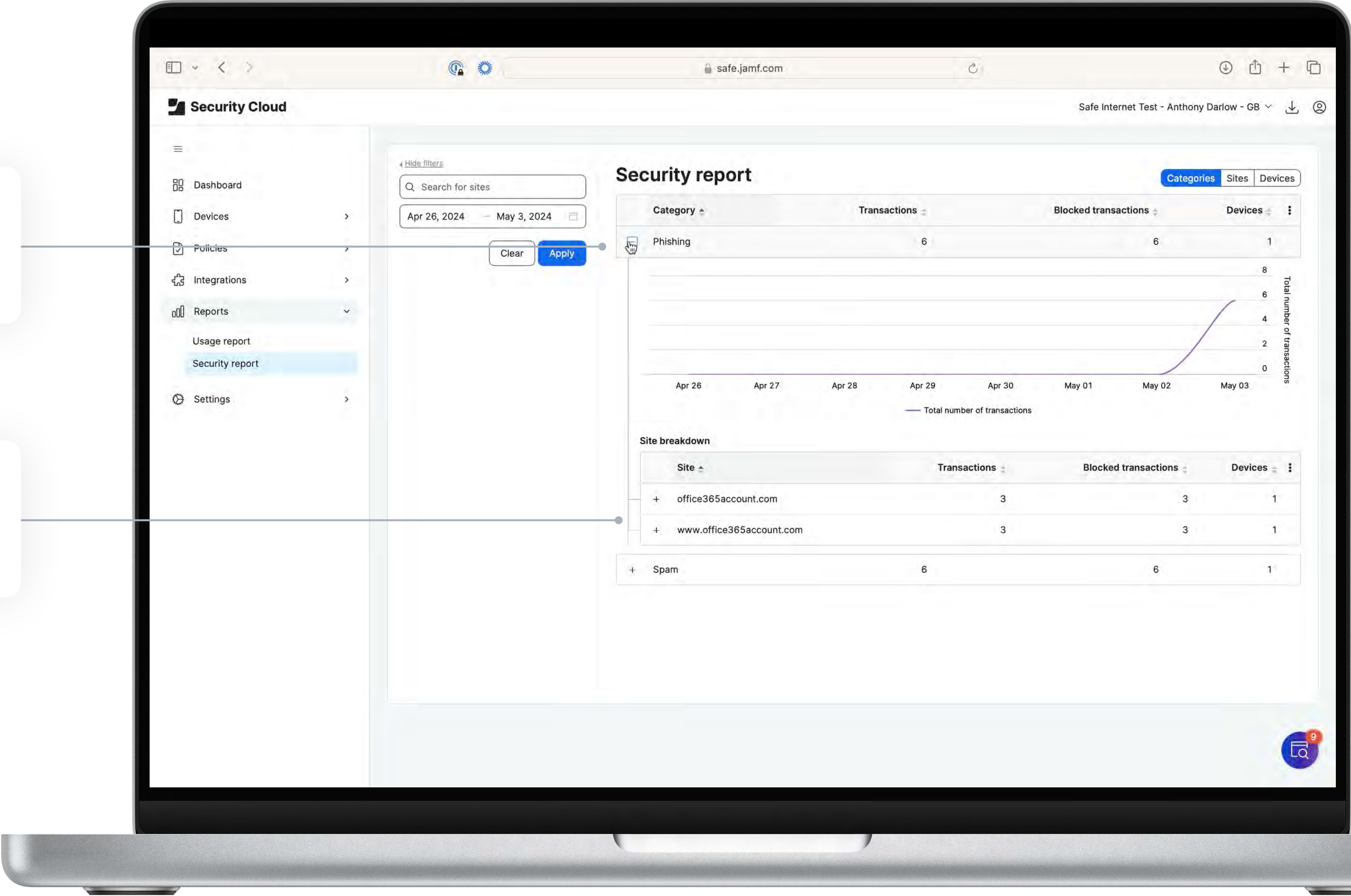
Security Reports

Reporting in the Jamf Safe Internet console to enable Admins to gain more insights to threats

Site Breakdown

View the destination that the user was try to go to as well as number of transactions

Security Reports

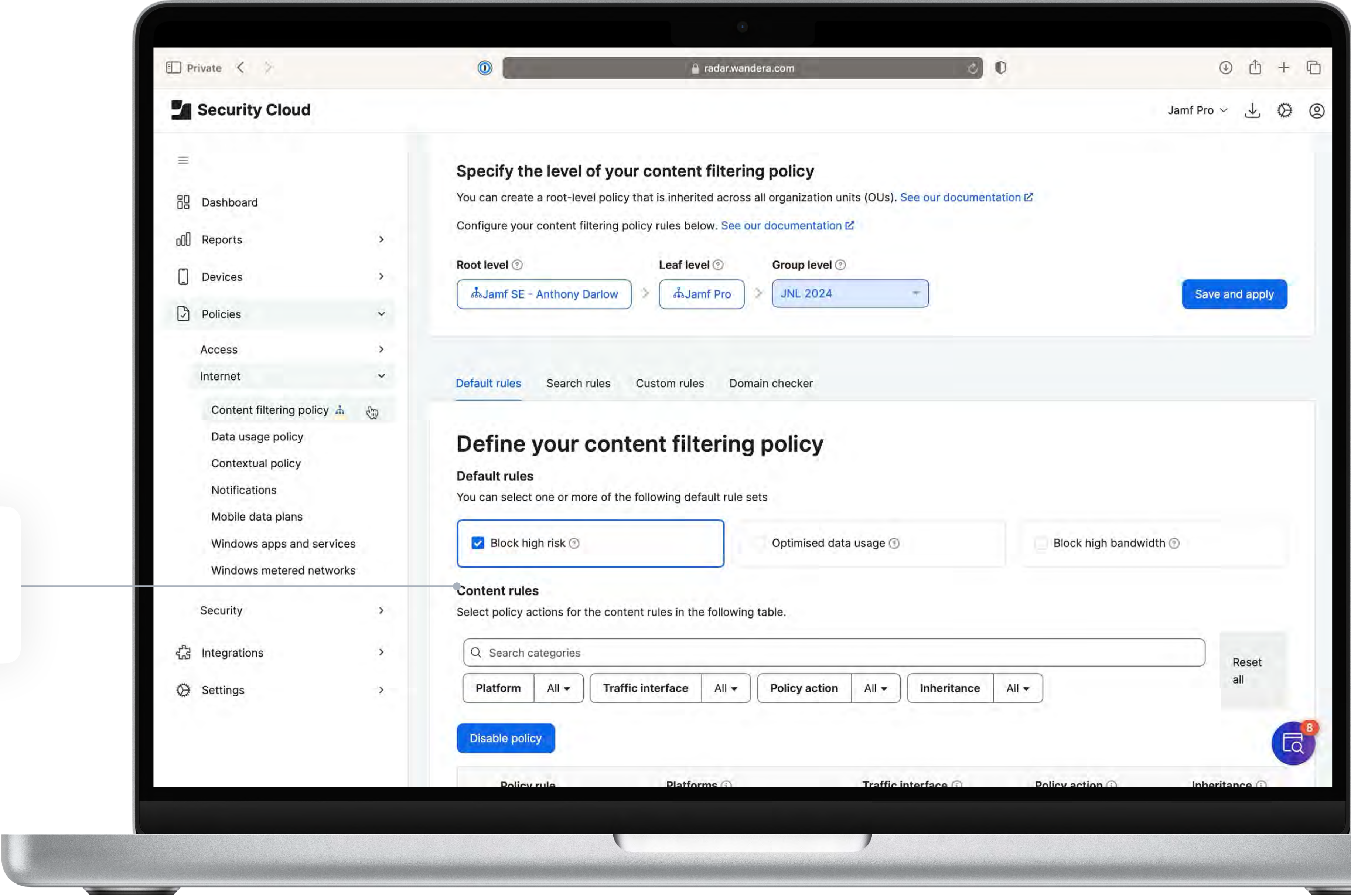


Device Insights
Gather insights of device and users to help with user education or further investigation

Site Breakdown
View the destination that the user was try to go to as well as number of transactions

JSC/JSI URL filtering

URL Filtering



Domain Checker

Easily find how a domain is categorised to inform the policies that you are creating

URL Filtering

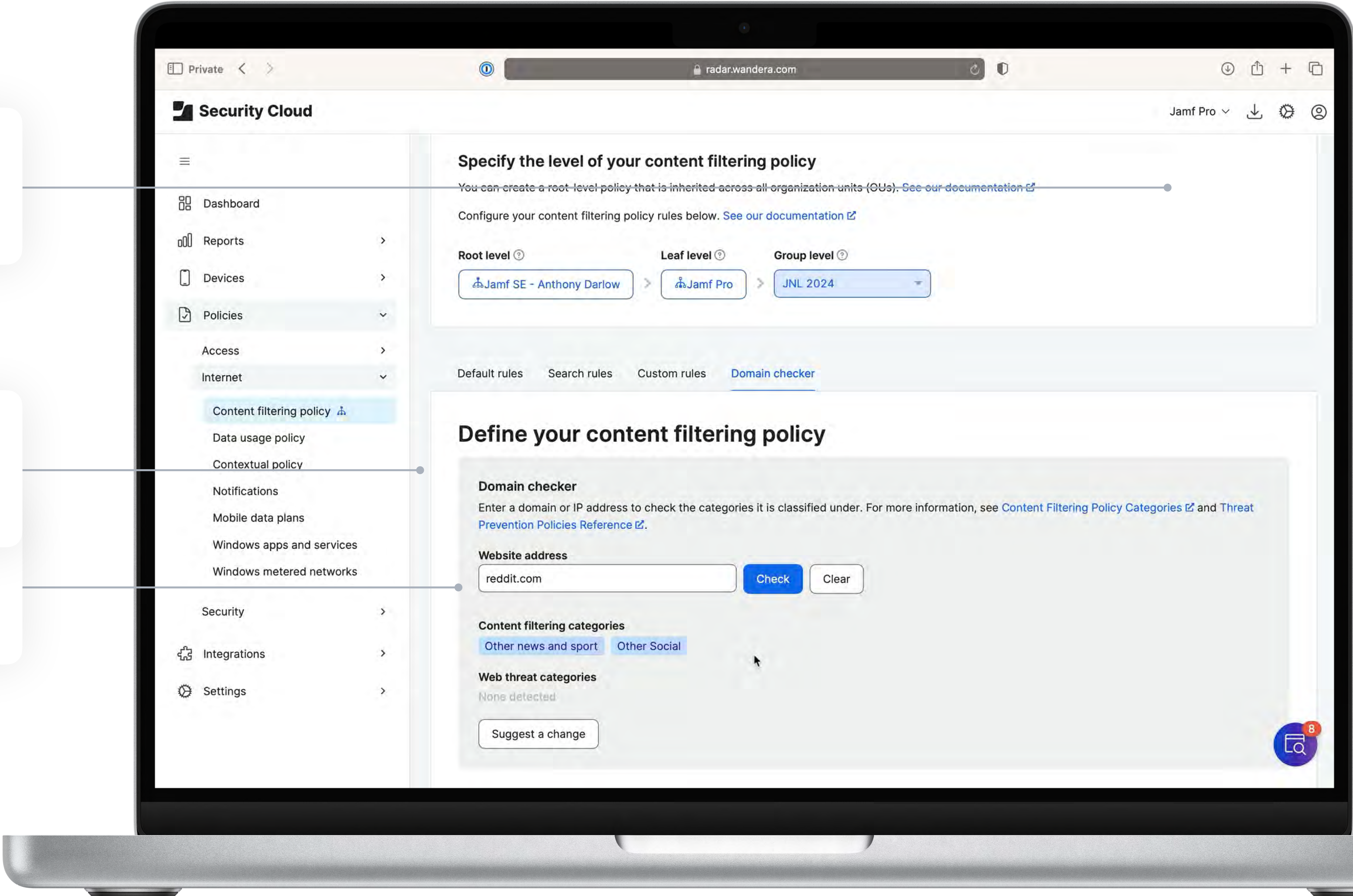
Save and apply

Always remember to “Save and apply” once you’ve made a change and before testing

Search Content Rules

Speed up your workflows by searching for a specific category to check or amend policy

Easily find how a domain is categorised to inform the policies that you are creating



URL Filtering

Save and apply

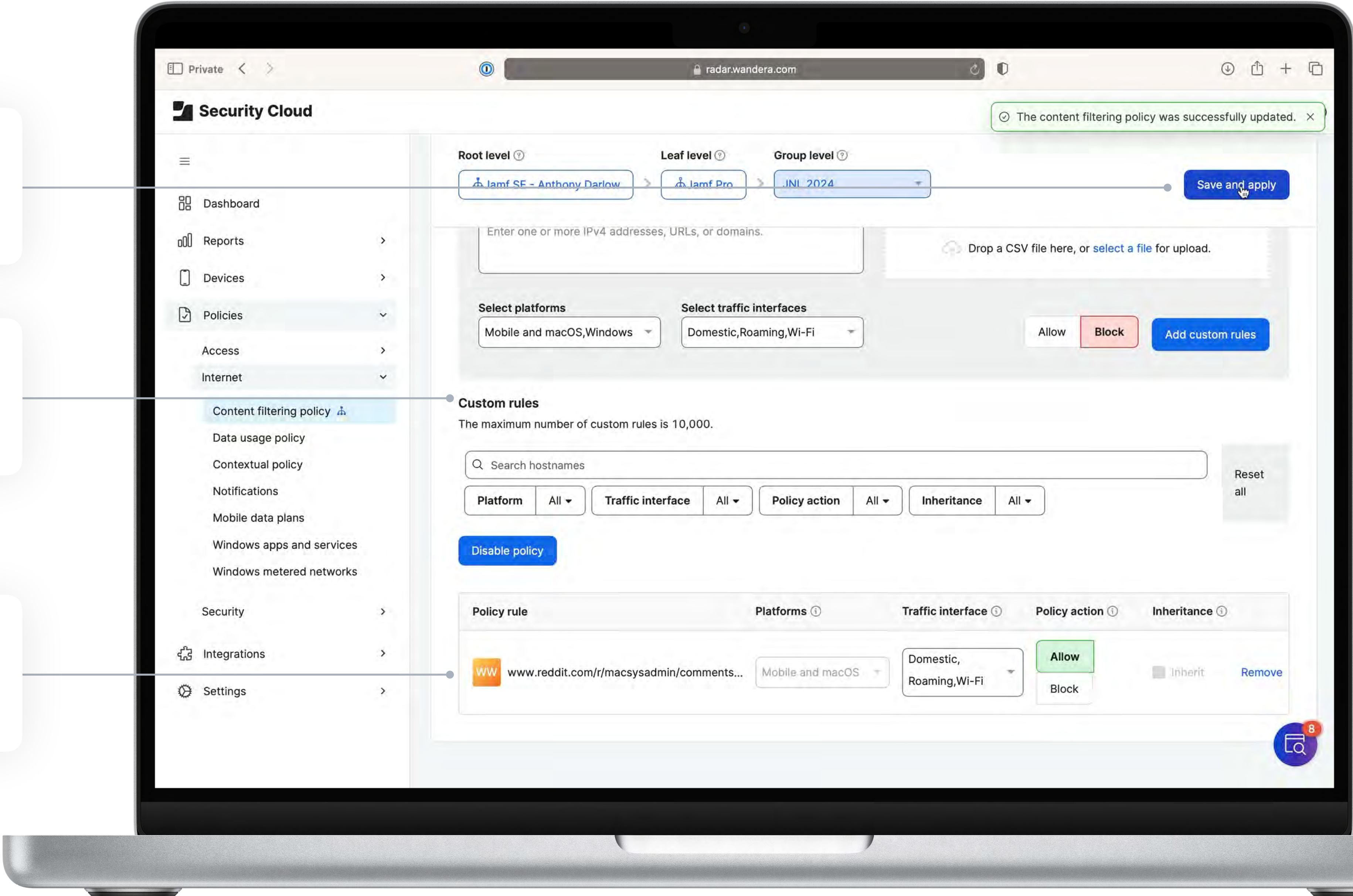
Always remember to “Save and apply” once you’ve made a change and before testing

Custom Rules

Allow you to bypass or block a specific domain or URL outside of category based blocking

Trust but Verify

Once the rule is added, verify that the policy rule is as expected before saving and applying



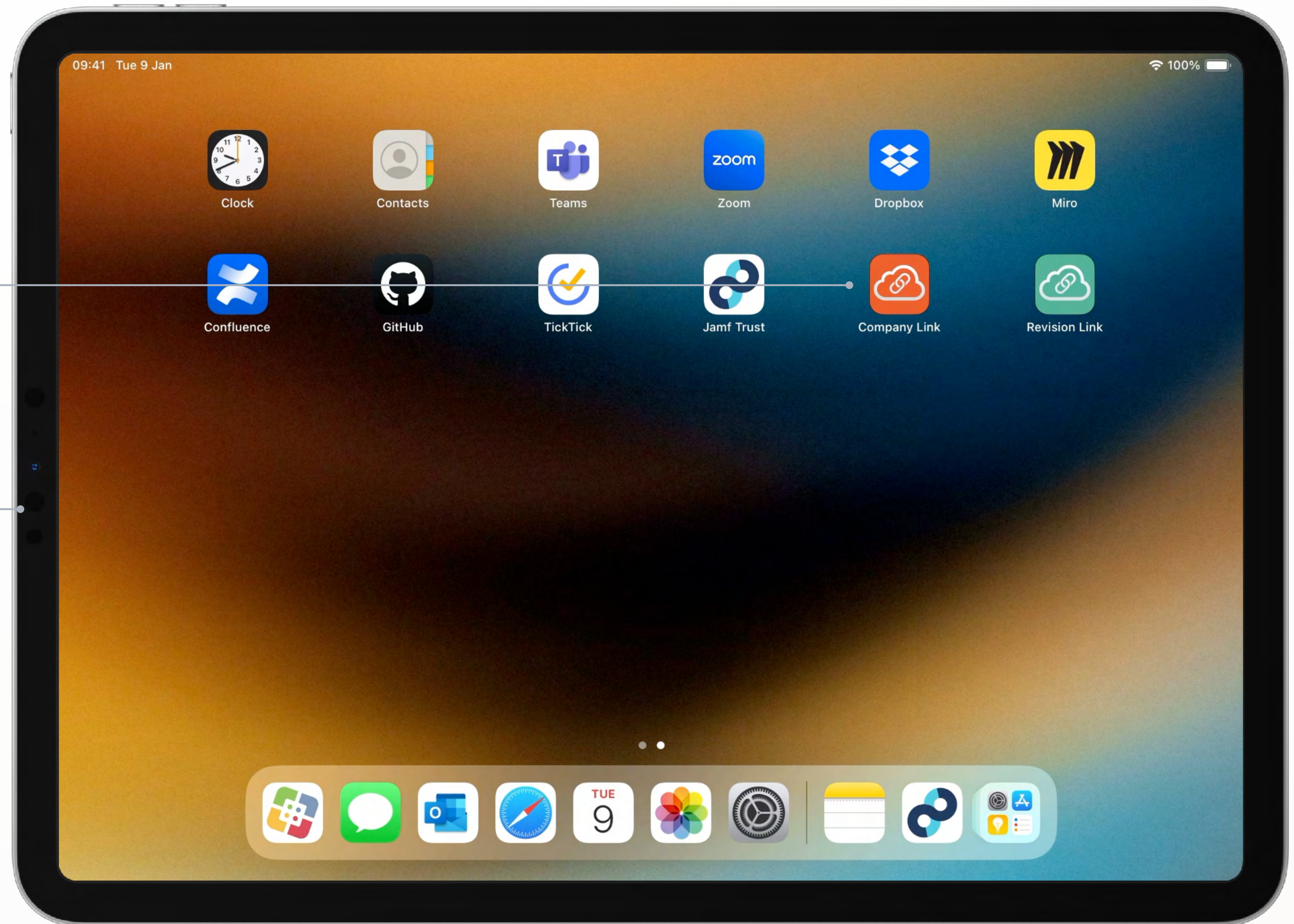
URL Filtering

User Experience

Specific URL paths can be tedious to type, provide users with a Web Clip via MDM

Verify on Device

Check that the category block is blocking the desired domain as expected



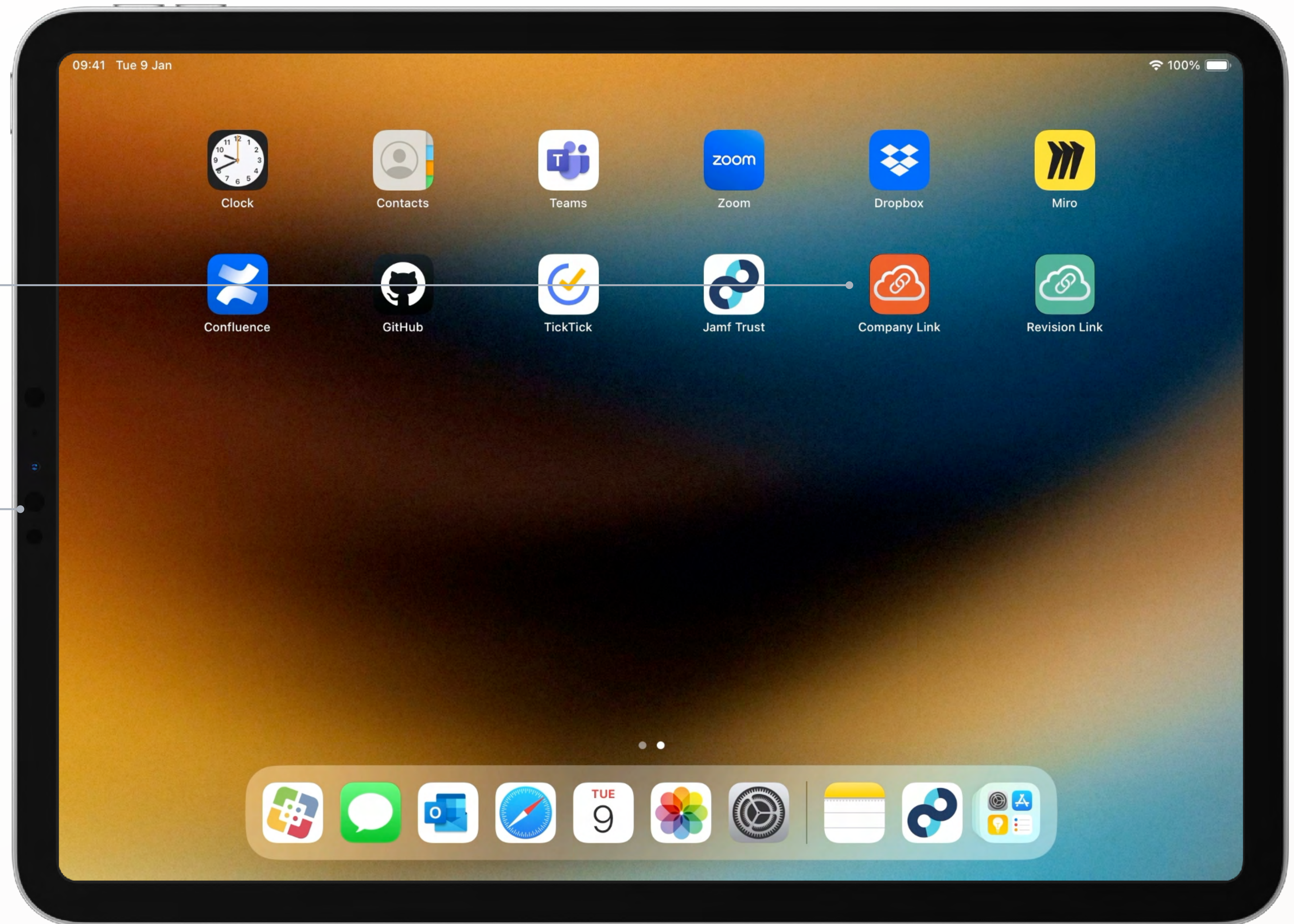
URL Filtering

User Experience

Specific URL paths can be tedious to type, provide users with a Web Clip via MDM

Access to specific URL

User can see main article however, it appears that elements of the webpage have not loaded



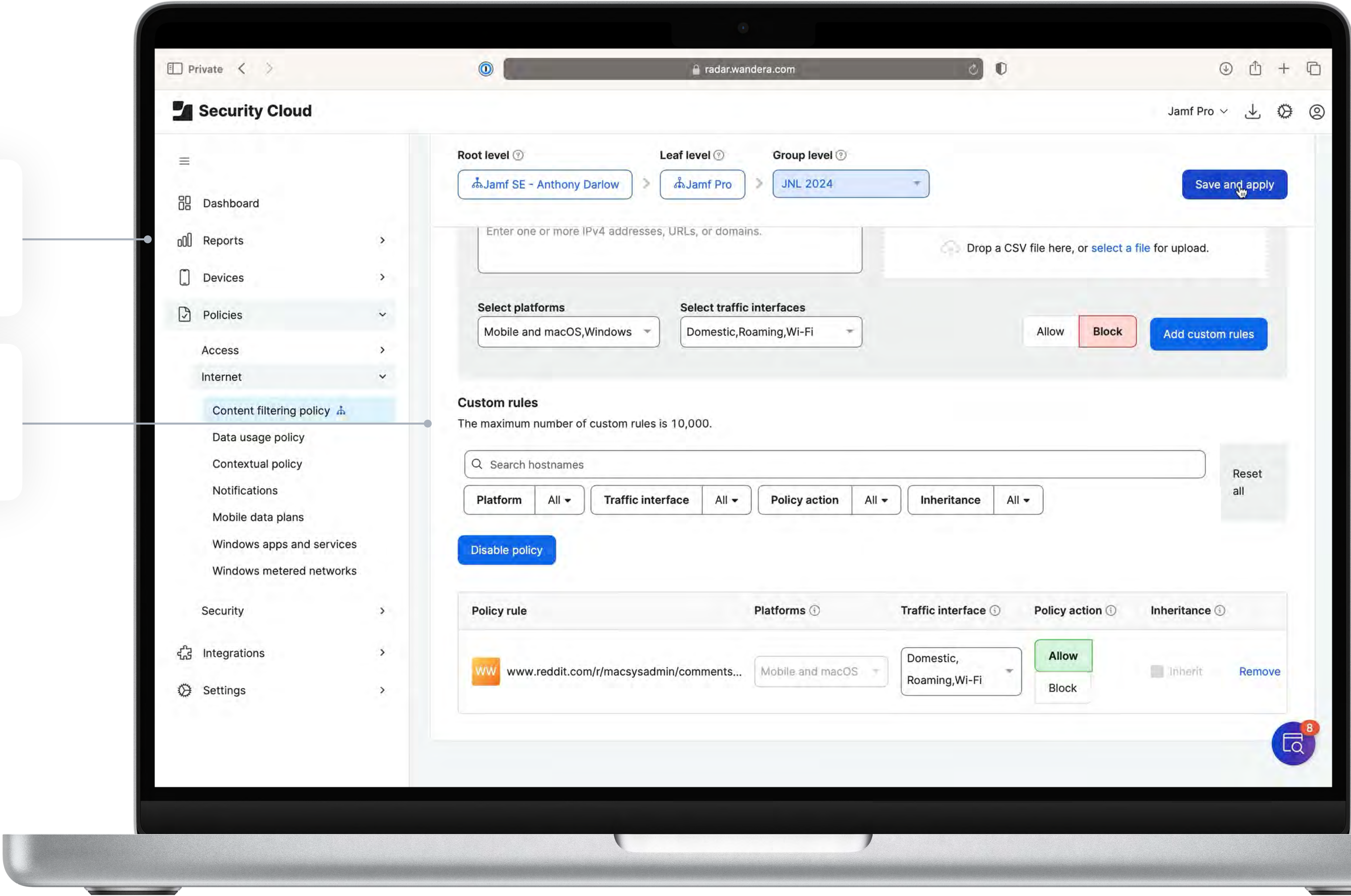
URL Filtering

Reports

Usage and site reporting can help with building unique and specific policies

Filter Reports

The reports filtering help to pinpoint the data that is useful to a given situation



URL Filtering

Reports

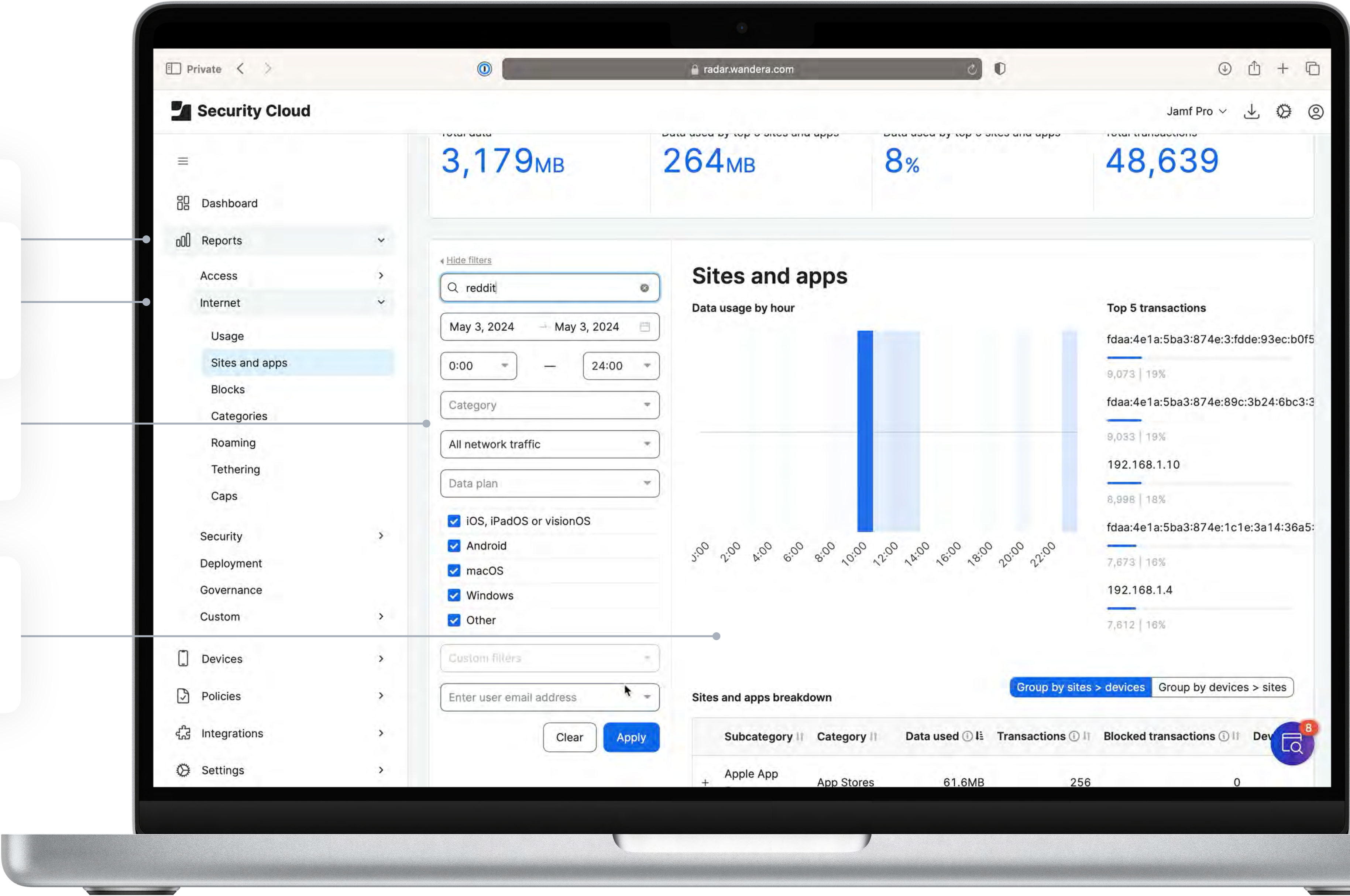
Build the Report

Click “Apply” to build a report based on the filters selected

The reports filtering help to pinpoint the data that is useful to a given situation

Sites Breakdown

View other hosts that the device has tried to contact while loading a specific domain



URL Filtering

Save and apply

Always remember to “Save and apply” once you’ve made a change and before testing

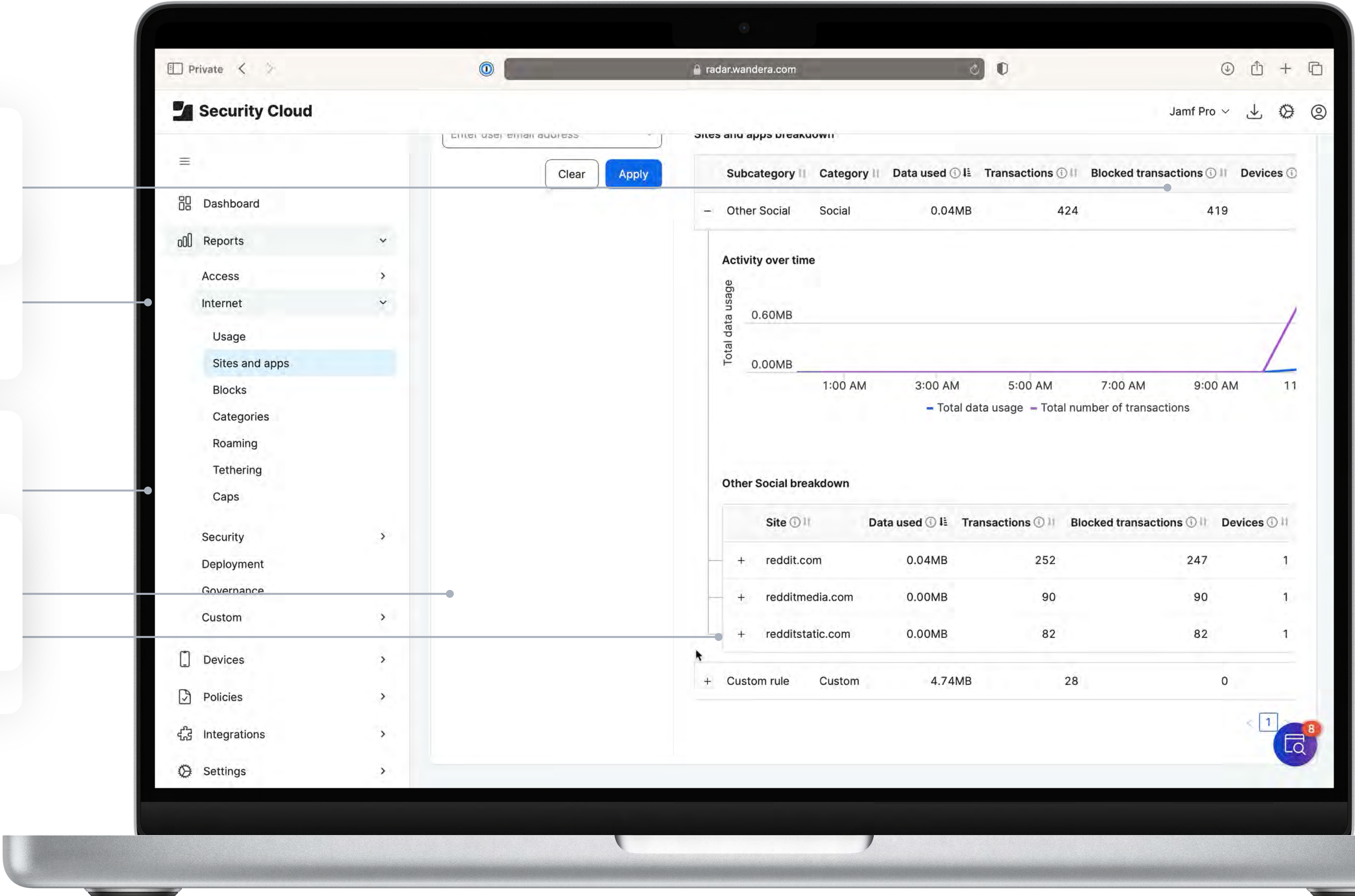
Click “Apply” to build a report based on the filters selected

Amend Policy

With the information gained from reports add additional Custom

Trust but Verify

Once the rule is added, verify that the policy rule is as expected before saving and applying specific domain



URL Filtering

Fully Loaded Webpage

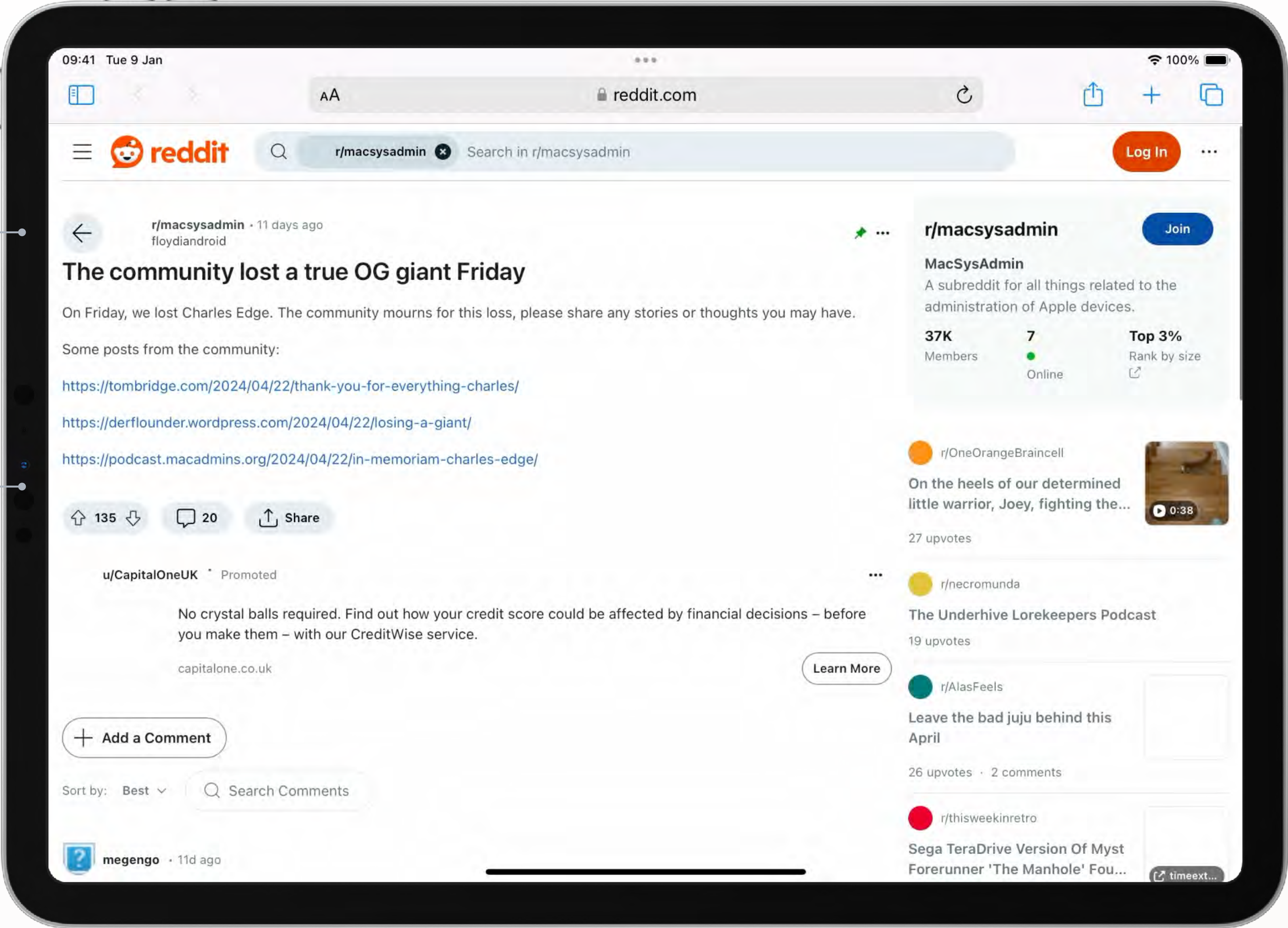
**Additional webpage elements are
now loaded**



URL Filtering

Following “outside” Links
Links and other pages are accessible once followed the allowed link “sandbox”

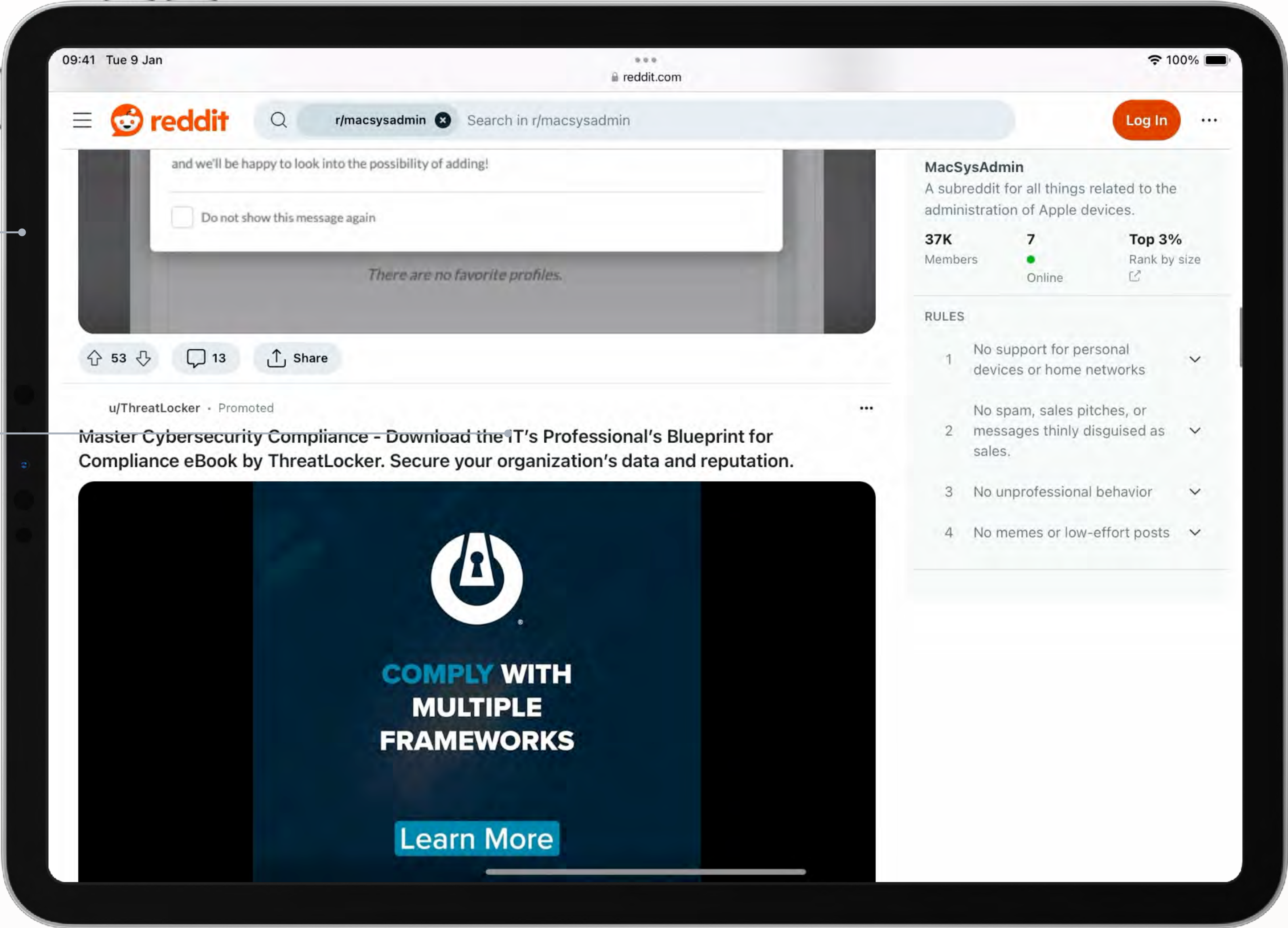
Fully Loaded Webpage
Additional webpage elements are now loaded



URL Filtering

Following “outside” Links
Links and other pages are accessible once followed the allowed link “sandbox”

Direct Browsing Blocked
Access to the main “macsysadmin” page restricted if browsed to directly



URL Filtering

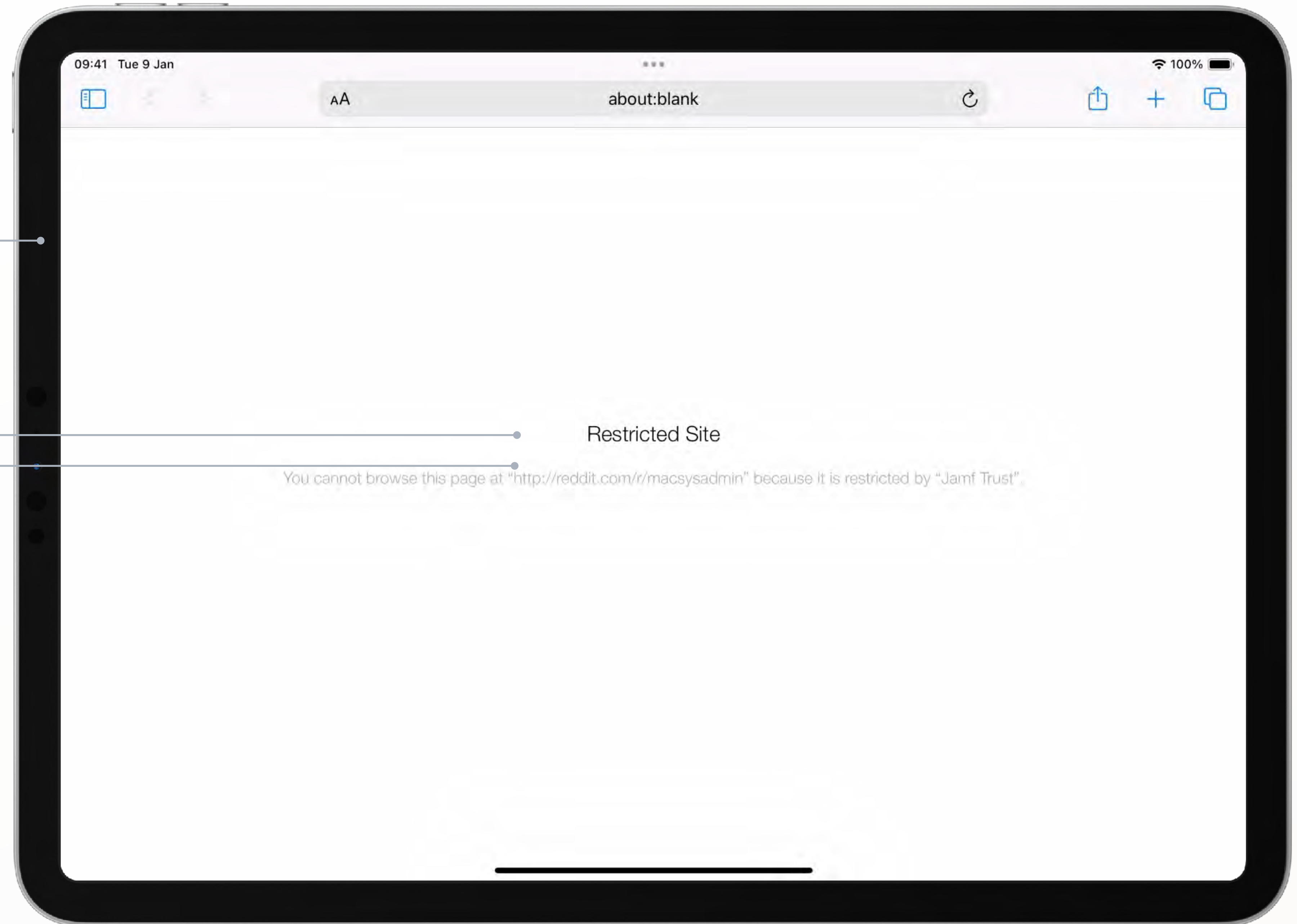
Shared Links

Users have access to links to other pages provided by messages, emails or saved elsewhere

Direct Browsing Blocked

Shared Links

Any link provided still gets blocked at direct access due to the category block in the main policy



URL Filtering

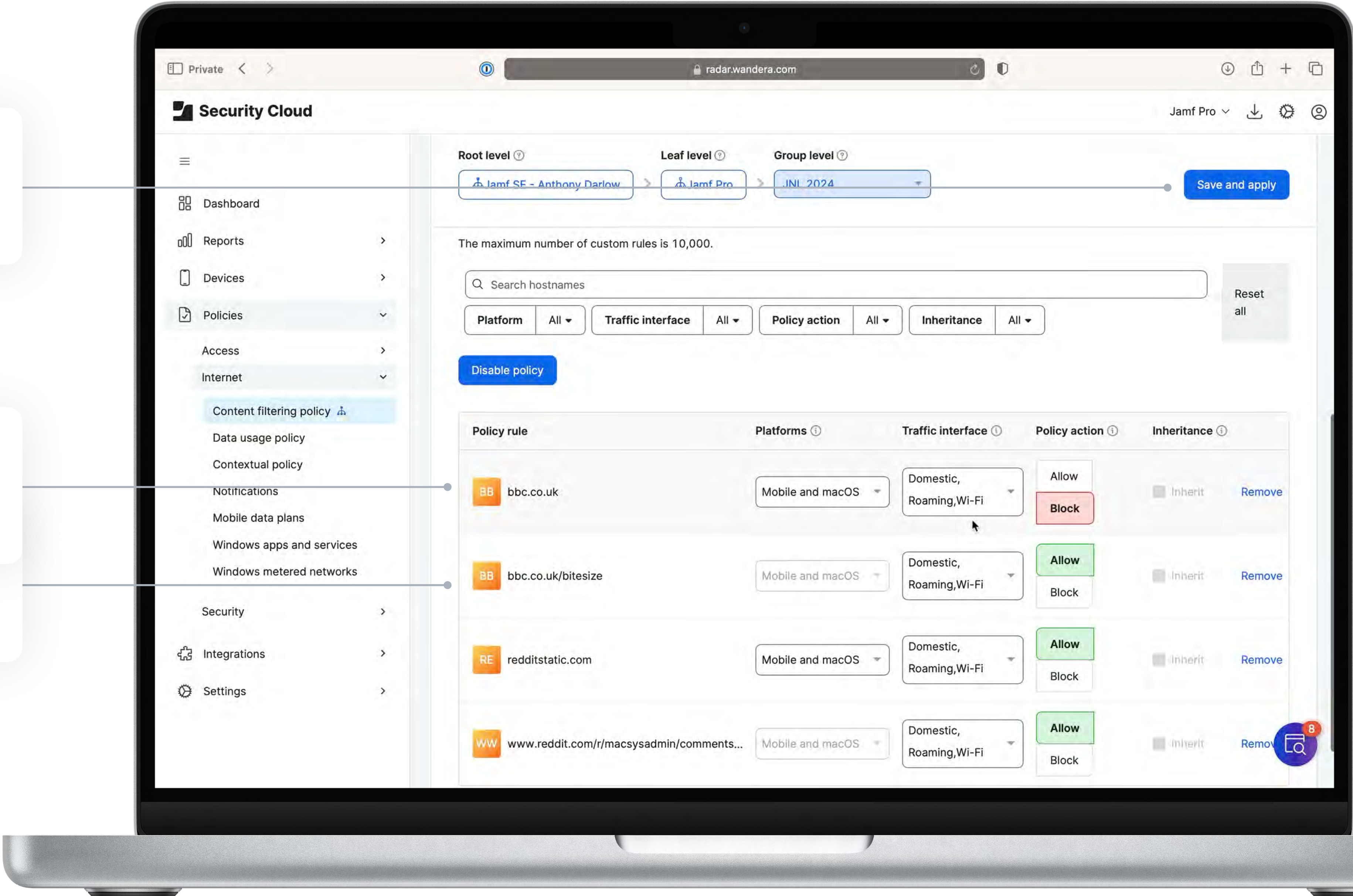
One Last Reminder!

Always remember to “Save and apply” once you’ve made a change and before testing

Blocking specific site

Block specific site due to not wanting to block others sites in the category

Block all of BBC apart from the Revision pages at bbc.co.uk/bitesize



URL Filtering

Website Navigation

Quick links to other sections of the BBC website. Easy for users to click and move away from Bitesize

Specific URL paths can be learned to type, provide users with a Web Clip via MDM

Fully Navigate Bitesize pages

Able to navigate the “bitesize” section of the website even with bbc.co.uk blocked in Policy



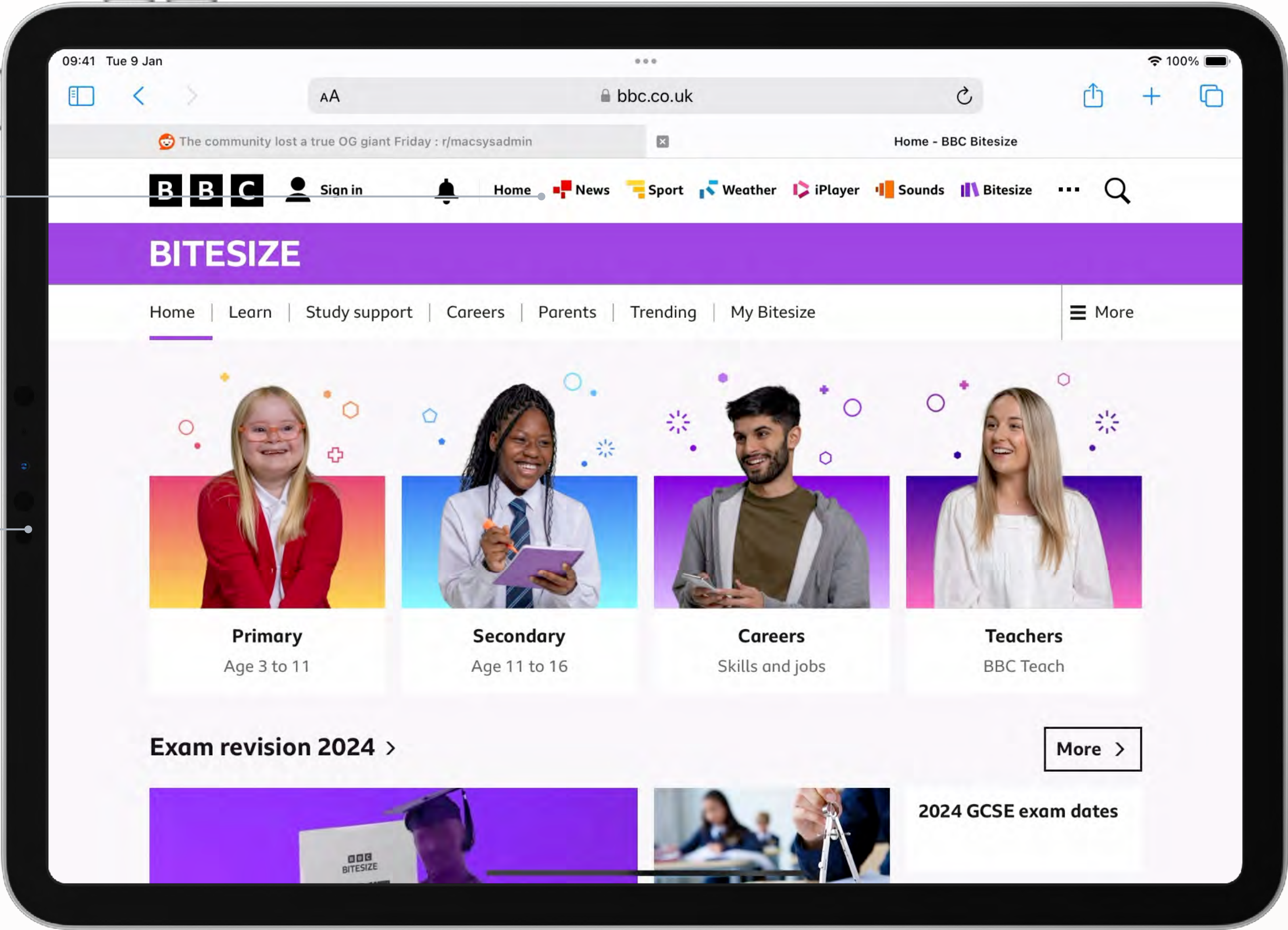
URL Filtering

Website Navigation

Quick links to other sections of the BBC website. Easy for users to click and move away from Bitesize

Blocked Access

Other areas of the BBC website restricted due to the Policy block on [bbc.co.uk](https://www.bbc.co.uk)





Thank you

Resources

Remember, a solution is only as strong as its users!

Useful links to further reading, learning and documentation



**YOU CLICKED
ON THE LINK
DIDN'T YOU.**



● JAMF NATION LIVE

Resources, links and useful
information

jamf.it/jnl24odcf