



Pivot of the Week: Host Pairs

The pivot of the Week: Host Pairs

For more than ten years, RiskIQ has been crawling and absorbing the internet to define the web's identity and composition by fingerprinting each web component, connection, service, IP-connected device, and infrastructure to show how organizations and the attackers targeting them fit within it.

RiskIQ's global collection network assembles, sorts, classifies, and monitors this internet data so analysts can leverage the relationships between these highly connected data sets to build out a thorough investigation. This process is the core of threat hunting and allows organizations to have a complete picture of attackers and their evolving techniques.

Host pairs is a data set derived from this process, unique to RiskIQ PassiveTotal. Host pairs are two domains (a parent and a child) that shared a connection observed from a RiskIQ web crawl, and its connections can range from a top-level redirect (HTTP 302) to something more complex, like an iframe or script source reference.

Host Pairs relies on knowing web site content, so it's likely to surface different values that other sources like passive DNS and SSL certificates do not. What makes this data set powerful is it gives researchers the ability to understand relationships between hosts based on details from visiting the actual page. Each connection has an observed first time and last time point that helps establish a time period for the pair of web properties and preserves a given relationship between two web properties that may no longer exist or remain valid.

Questions Host Pairs Can Answer

- Are there any additional suspicious hosts redirecting or being redirected from the indicator being investigated?
- What type of redirection is taking place?
- Where are users being redirected from/to?
- Are there any patterns with the redirections taking place?
- Does the number of pairs for a given property help in dictating if it's malicious or non-malicious?
- Have any of the connected artifacts been blacklisted?
- Have any of the connected artifacts been tagged as malicious?
- What is the source of the malware in this domain?
- Is this domain redirecting users to malicious content?
- Are resources pulling in CSS or images to set up infringement attacks?
- Are resources pulling in a Script to setup a magedom or skimming attack?

Host Pairs Causes in Action

RiskIQ tracks over 16,000 Host Pair causes. Many of them are HTML tags and attributes.

Img.src

What is an img.src cause?

The website is linking an external image that is hosted on another website.

<https://community.riskiq.com/search/assets.nflxext.com/hostpairs>

On the right side under **CAUSE** click the check icon next to img.src. This will filter the results to show just host pairs that were caused by img.src

The screenshot shows the RiskIQ community search interface. The search query is 'www.gumballs.net'. The results are filtered by 'CAUSE' to 'script.src'. The table displays the following data:

Parent Hostname	Child Hostname	First	Last	Cause	Tags
www.gumballs.net	cdnanalytics.net	2018-03-31	2020-11-09	script.src	Malicious Code
www.gumballs.net	www.google-analytics.com	2016-02-06	2020-11-09	script.src	Malicious Code
www.gumballs.net	ssl.google-analytics.com	2020-05-29	2020-11-04	script.src	Malicious Code
www.gumballs.net	ajax.googleapis.com	2016-12-16	2020-10-10	script.src	Malicious Code
www.gumballs.net	s7.addthis.com	2016-12-16	2018-03-31	script.src	Malicious Code

The left sidebar shows filters for 'DIRECTION' (parents, children), 'PARENT HOSTNAME' (10 / 21), and 'CAUSE' (9 / 34). The 'CAUSE' filter is currently set to 'script.src'.

script.src

What does a Script cause mean?:

The src attribute specifies the domain where an external script file is pulled from to run.

Example: If you want to run the same JavaScript on several pages in a web site, you should create an external JavaScript file instead of writing the same script over and over again. But, malicious skimmers like Magecart will do this is how threat actors run

<https://community.riskiq.com/search/gov.uk-tax-it-or-lose-it.com/hostpairs>

On the right side under **CAUSE** click the check icon next to script.src. This step will filter the results to show just host pairs that were caused by script.src

The screenshot shows the RiskIQ community search interface. The search bar contains "gov.uk-tax-it-or-lose-it.com". The results are filtered by "CAUSE" to "css.import". The heatmap shows activity from June to November. The table below shows the host pairs.

Parent Hostname	Child Hostname	First	Last	Cause	Tags
gov.uk-tax-it-or-lose-it.com	www.gov.uk	2020-10-27	2020-11-03	css.import	

CSS import

What does CSS import mean as a cause?

Cascading Style Sheets (CSS) is a stylesheet language used to describe the presentation of a document written in HTML or XML (including XML dialects such as SVG, MathML or XHTML). CSS describes how elements should be rendered on screen, on paper, in speech, or on other media.

Threat actors targeting phishing attacks will import the CSS from the domain they are targeting to duplicate the domain.

<https://community.riskiq.com/search/gov.uk-tax-it-or-lose-it.com/hostpairs>

On the right side under **CAUSE** click the check icon next to CSS.import. This step will filter the results to show just host pairs that were caused by css.import.

The screenshot shows the RiskIQ community search interface. The search query is 'www.nypost.com'. The 'CAUSE' filter is expanded, showing a list of causes with 'parentPage' selected. The results table shows two host pairs:

Parent Hostname	Child Hostname	First	Last	Cause	Tags
www.nypost.com	www.nypost.com	2019-04-23	2019-04-23	parentPage	
www.tokinn.com	www.nypost.com	2018-11-08	2018-11-08	parentPage	

parentPage

What is a parent page cause?

A parent page is a top-level page of a website that may have child pages nested under it.

<https://community.riskiq.com/search/www.nypost.com/hostpairs>

On the right side under **CAUSE** click the check icon next to 'parentpage.' This step will filter the results to show just host pairs that were caused by a parent page.

The screenshot shows the RiskIQ community search interface. The search query is 'www.nypost.com'. The results are filtered by 'CAUSE' and 'parentPage'. The table displays two host pairs:

Parent Hostname	Child Hostname	First	Last	Cause	Tags
<input type="checkbox"/> www.nypost.com	www.nypost.com	2019-04-23	2019-04-23	parentPage	
<input type="checkbox"/> www.tokann.com	www.nypost.com	2018-11-08	2018-11-08	parentPage	

The left sidebar shows filters for 'DIRECTION', 'PARENT HOSTNAME', 'CAUSE', and 'CHILD HOSTNAME'. The 'CAUSE' filter is expanded, showing 'parentPage' with 2 results.

Redirect

What does redirect cause mean?

Within HTTP response codes, the 3xx (Redirection) class of status code indicates that further action needs to be taken by the user agent to fulfill the request. If a Location header field is provided, the user agent MAY automatically redirect its request to the URI referenced by the Location field value, even if the specific status code is not understood.

During the Presidential election of 2020, we saw numerous redirects to both Presidential candidates' official domains. These redirects were to help or harm the candidates' reputation with voters.

<https://community.riskiq.com/search/www.donaldtrump.com/hostpairs>

On the right side under **CAUSE** click the check icon next to redirect. This will filter the results to just show host pairs that were caused by a redirect.

The screenshot shows the RiskIQ community search interface. The search query is **www.donaldtrump.com**. The results are filtered by **CAUSE: redirect**, showing 321 results. The table displays host pairs with columns for Parent Hostname, Child Hostname, First, Last, Cause, and Tags. The results show various redirects to **www.donaldtrump.com** from various parent domains like **blog.globalbank500.com**, **donaldtrump.com**, **trumpfascism.tk**, etc.

Parent Hostname	Child Hostname	First	Last	Cause	Tags
blog.globalbank500.com	www.donaldtrump.com	2020-10-01	2020-11-09	redirect	
donaldtrump.com	www.donaldtrump.com	2016-02-02	2020-11-09	redirect	
trumpfascism.tk	www.donaldtrump.com	2020-09-21	2020-11-09	redirect	
donaldtrump.com	www.donaldtrump.com	2016-02-16	2020-11-09	redirect	
blog.pcofficebank.com	www.donaldtrump.com	2020-10-01	2020-11-09	redirect	
bidenaccountability.com	www.donaldtrump.com	2020-11-09	2020-11-09	redirect	
namblafortrump.com	www.donaldtrump.com	2020-09-10	2020-11-09	redirect	
mail11.banking500.com	www.donaldtrump.com	2020-10-07	2020-11-09	redirect	
trumplovesdebt.com	www.donaldtrump.com	2020-10-09	2020-11-08	redirect	
covid19curedrug.com	www.donaldtrump.com	2020-09-03	2020-11-08	redirect	
Indiemapper.com	www.donaldtrump.com	2017-10-05	2020-11-08	redirect	
www.thewoodlandsfortrump.com	www.donaldtrump.com	2020-11-08	2020-11-08	redirect	
thissubdomainshouldonlyresolveifwildcard.whitepowertrump.com	www.donaldtrump.com	2020-11-08	2020-11-08	redirect	
covid19failure.republican	www.donaldtrump.com	2020-11-06	2020-11-08	redirect	
antifabackstrump.com	www.donaldtrump.com	2020-09-09	2020-11-08	redirect	
pedosfortrump.com	www.donaldtrump.com	2020-09-11	2020-11-08	redirect	
mailrelay.bankalliancepartners.com	www.donaldtrump.com	2020-10-22	2020-11-08	redirect	

<https://community.riskiq.com/search/joebiden.com/hostpairs>

On the right side under **▼ CAUSE** click the check icon next to redirect. This will filter the results to show just host pairs that were caused by a redirect.

The screenshot shows the RiskIQ community search results for the query 'joebiden.com'. The page is filtered by 'CAUSE' to show only 'redirect' results. The table below lists the host pairs found.

Parent Hostname	Child Hostname	First	Last	Cause	Tags
seniorcitizensfortrump.org	joebiden.com	2020-10-15	2020-11-09	redirect	
trumpsreads.com	joebiden.com	2020-10-09	2020-11-09	redirect	
lovedaddytrump.com	joebiden.com	2020-09-03	2020-11-09	redirect	
amyconeybarrettagainstrump.com	joebiden.com	2020-09-26	2020-11-09	redirect	
www.notrumpropence.com	joebiden.com	2020-10-13	2020-11-09	redirect	
qanonfortrump.com	joebiden.com	2020-09-15	2020-11-09	redirect	
trumpinfrastructureplan.com	joebiden.com	2020-10-25	2020-11-09	redirect	
michaelmaylovesbiden.com	joebiden.com	2020-09-06	2020-11-08	redirect	
covid19isahoax.org	joebiden.com	2020-10-09	2020-11-08	redirect	
www.bideninracist.com	joebiden.com	2020-11-08	2020-11-08	redirect	
indictedbiden.com	joebiden.com	2020-10-12	2020-11-08	redirect	
horrtalk.com	joebiden.com	2020-11-08	2020-11-08	redirect	
jeremiaheleemastersandrichardalversonarevotingforjoebiden.com	joebiden.com	2020-09-11	2020-11-08	redirect	
qanon4biden.com	joebiden.com	2020-09-15	2020-11-08	redirect	
antifa.com	joebiden.com	2020-08-31	2020-11-08	redirect	
bedbathandbiden.com	joebiden.com	2020-10-24	2020-11-08	redirect	
dontrumpj.org	joebiden.com	2020-10-11	2020-11-08	redirect	
suburbanwomenfortrump.org	joebiden.com	2020-10-15	2020-11-08	redirect	
www.antifafortrump2020.com	joebiden.com	2020-09-04	2020-11-08	redirect	

Link.href

What does a link.href mean as a cause?

The href attribute specifies the URL of the page the link goes to.

<https://community.riskiq.com/search/joebiden.com/hostpairs>

On the right side under **CAUSE** click the check icon next to link.href. This will filter the results to just show host pairs that were caused by a link.href.

The screenshot shows the RiskIQ community search interface. The search query is 'joebiden.com'. The results are filtered by 'CAUSE' to 'link.href'. The table displays 25 host pairs, sorted by 'Last Seen Descending'.

Filters:

- DIRECTION:**
 - ✓ parents
 - ✓ children
- PARENT HOSTNAME (10 / 430):**
 - ✓ X joebiden.com 135
 - ✓ X go.joebiden.c... 108
 - ✓ X store.joebiden... 70
 - ✓ X share.joebiden... 36
 - ✓ X secure.joebide... 21
- CAUSE (10 / 720):**
 - ✓ X redirect 249
 - ✓ X unknown 174
 - ✓ X script.src 94
 - ✓ X topLevelRedirect 57
 - ✓ X parentPage 47
- CHILD HOSTNAME (10 / 351):**
 - ✓ X joebiden.com 235
 - ✓ X go.joebiden.com 23
 - ✓ X use.typekit.net 16
 - ✓ X www.google-an... 15
 - ✓ X secure.joebide... 13

Host Pairs Table:

Parent Hostname	Child Hostname	First	Last	Cause	Tags
joebiden.com	maxcdn.bootstrapcdn.com	2020-08-05	2020-11-09	link.href	
joebiden.com	src.joebiden.com	2020-10-13	2020-11-09	link.href	
joebiden.com	joebiden.com	2020-11-09	2020-11-09	link.href	
secure.actblue.com	assets.joebiden.com	2020-09-16	2020-11-08	link.href	
go.joebiden.com	joebiden.com	2019-04-25	2020-11-08	link.href	
www.googletagmanager.com	joebiden.com	2019-08-09	2020-11-08	link.href	
store.joebiden.com	cdn11.bigcommerce.com	2019-10-18	2020-11-08	link.href	
live.joebiden.com	cdn1.bmd.live	2020-07-08	2020-11-08	link.href	
live.joebiden.com	cdn2.bmd.live	2020-06-03	2020-11-08	link.href	
secure.joebiden.com	nvupin.blob.core.windows.net	2020-06-09	2020-11-06	link.href	
secure.joebiden.com	use.typekit.net	2019-09-03	2020-11-06	link.href	
secure.joebiden.com	d3rse9qbp8270.cloudfront.net	2020-06-02	2020-11-06	link.href	
go.joebiden.com	use.typekit.net	2020-07-21	2020-11-06	link.href	
live.joebiden.com	cdn.bmd.live	2020-06-03	2020-11-05	link.href	
live.joebiden.com	libraries.brand.live	2020-10-23	2020-11-05	link.href	
store.joebiden.com	fonts.googleapis.com	2019-10-18	2020-11-05	link.href	
www.googletagmanager.com	go.joebiden.com	2020-02-15	2020-10-25	link.href	
joebiden.com	cdn.optimizely.com	2020-07-23	2020-10-13	link.href	
stories.inahiden.com	firebasestorage.firebaseio.com	2020-09-15	2020-10-09	link.href	

Iframe.src

What is an iframe.src?

The src attribute specifies the address of the document to embed in the iframe. Within PassiveTotal the domain and relationship is seen but not the full path.

<https://community.riskiq.com/search/www.donaldtrump.com/hostpairs>

On the right side under **CAUSE** click the check icon next to iframe.src. This will filter the results to just show host pairs that were caused by iframe.src.

The screenshot shows the RiskIQ community search interface. The search query is `www.donaldtrump.com`. The results are filtered by **CAUSE** to show only `iframe.src` relationships. The table displays 18 host pairs, sorted by 'Last Seen Descending'.

Parent Hostname	Child Hostname	First	Last	Cause	Tags
www.donaldtrump.com	a8416096648.cdn-pcl.optimizely.com	2020-11-06	2020-11-06	iframe.src	
www.donaldtrump.com	9448820.fs.doubleclick.net	2020-04-28	2020-05-20	iframe.src	
www.donaldtrump.com	www.youtube.com	2016-02-01	2020-05-06	iframe.src	
www.donaldtrump.com	www.google.com	2016-02-05	2018-11-16	iframe.src	
links.com	www.donaldtrump.com	2016-02-12	2017-04-15	iframe.src	Malicious
www.donaldtrump.com	www.washingtonpost.com	2016-02-06	2017-01-15	iframe.src	
www.donaldtrump.com	www.facebook.com	2016-10-20	2016-10-20	iframe.src	
www.donaldtrump.com	embed.gettyimages.com	2016-03-21	2016-10-20	iframe.src	
www.donaldtrump.com	googleads.g.doubleclick.net	2016-06-04	2016-10-08	iframe.src	
www.donaldtrump.com	assets.adobedtm.com	2016-08-09	2016-10-08	iframe.src	
www.donaldtrump.com	player.theplatform.com	2016-08-26	2016-09-23	iframe.src	
www.donaldtrump.com	bid.g.doubleclick.net	2016-09-14	2016-09-14	iframe.src	
www.donaldtrump.com	www.cnn.com	2016-08-03	2016-09-06	iframe.src	
www.donaldtrump.com	video.aplwsj.com	2016-07-19	2016-07-19	iframe.src	
www.donaldtrump.com	www.nbcnews.com	2016-05-08	2016-06-06	iframe.src	
www.donaldtrump.com	abcnews.go.com	2016-05-17	2016-06-06	iframe.src	
www.donaldtrump.com	cbs.com	2016-02-26	2016-06-06	iframe.src	
www.donaldtrump.com	launch.newsinc.com	2016-02-01	2016-04-05	iframe.src	

Filters on the left include: DIRECTION (parents, children), PARENT HOSTNAME (10 / 419), CAUSE (10 / 786), and CHILD HOSTNAME (10 / 474). The CAUSE filter is currently set to `iframe.src`.

Xmlhttprequest

What is an xmlhttprequest cause?

The XMLHttpRequest object can be used to request data from a web server.

The XMLHttpRequest object can be used to:

- Update a web page without reloading the page
- Request data from a server - after the page has loaded
- Receive data from a server - after the page has loaded
- Send data to a server - in the background

<https://community.riskiq.com/search/www.270twin.com/hostpairs>

On the right side under **CAUSE** click the check icon next to xmlhttprequest. This will filter the results to show just host pairs that were caused by xmlhttprequest.

The screenshot shows the RiskIQ community search interface. The search query is **www.270twin.com**. The results are filtered by **CAUSE** to **xmlhttprequest**. The interface includes a heatmap, a timeline, and a table of host pairs.

HEATMAP

Legend: [Color-coded squares]

DATA

Resolutions: 35 | Whois: 3 | Certificates: 2 | Subdomains: 18 | Trackers: 152 | Components: 732 | Host Pairs: 1K | OSINT: 0 | Hashes: 5 | DNS: 6 | Projects: 0 | Cookies: 3K | CrowdStrike: 0

FILTERS

- DIRECTION**
 - parents
 - children
- PARENT HOSTNAME (10 / 417)**
 - www.270twin.com 390
 - ajax.googleapis.com 5
 - bscorecardrese.com 4
 - code.jquery.com 4
 - ajax.cloudflare.com 3
- CAUSE (10 / 1,003)**
 - iframe.src 332
 - img.src 272

HOST PAIRS

Sort: Last Seen Descending | 25 / Page

Parent Hostname	Child Hostname	First	Last	Cause	Tags
code.jquery.com	www.270twin.com	2016-02-28	2020-11-04	xmlhttprequest	
ajax.googleapis.com	www.270twin.com	2016-02-16	2020-09-21	xmlhttprequest	
maps.googleapis.com	www.270twin.com	2016-05-17	2019-08-03	xmlhttprequest	
apis.google.com	www.270twin.com	2018-07-15	2019-02-25	xmlhttprequest	
www.270twin.com	securepubads.g.doubleclick.net	2019-01-14	2019-01-14	xmlhttprequest	
www.270twin.com	trends.revcontent.com	2017-09-19	2018-06-25	xmlhttprequest	

Location.refresh

What does a location.refresh cause mean?

The Location.reload() method reloads the current URL, like the Refresh button in a web browser.

<https://community.riskiq.com/search/vote4dc.com/hostpairs>

On the right side under **CAUSE** click the check icon next to location.refresh. This will filter the results to show just host pairs that were caused by location.refresh.

community.riskiq.com/search/vote4dc.com/hostpairs

Enterprise License

Query Results

ANALYST INSIGHTS

Not Blacklisted Resolving IPs Not Blacklisted Registered 7 years ago Updated 3 months ago 6 IPs for subdomains New subdomain 3 months ago Registered Resolves to IP Not Alexa 100K 4970725 domains share whois record 2545910 domains share nameserver Crawled By RiskIQ 5 days ago Not an International Domain

HEATMAP

LEGEND

DATA

11 7 100 4 4 29 19 0 1 21 0 83 0

Resolutions Whois Certificates Subdomains Trackers Components Host Pairs OSINT Hashes DNS Projects Cookies CrowdStrike

FILTERS

DIRECTION

parents

children

PARENT HOSTNAME (10 / 19)

www.vote4dc.com 10

ajax.googleapis.com 1

ge.vote4dc.com 1

l.facebook.com 1

meetup.us.list... 1

Show More

CAUSE (7 / 19)

location.refresh 4

redirect 4

HOST PAIRS

1 - 4 of 4 Sort: Last Seen Descending 25 / Page

Parent Hostname	Child Hostname	First	Last	Cause	Tags
www.vote4dc.com	dcboe.org	2019-02-15	2020-11-09	location.refresh	
l.facebook.com	www.vote4dc.com	2020-10-04	2020-11-09	location.refresh	
vote4dc.com	dcboe.org	2020-08-24	2020-11-04	location.refresh	
Lco	vote4dc.com	2017-10-02	2017-10-02	location.refresh	

1 - 4 of 4

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Meta.refresh

What is a meta.refresh cause?

Meta refresh is a method of instructing a web browser to automatically refresh the current web page or frame after a given time interval, using an HTML meta element with the http-equiv parameter set to “refresh” and a content parameter giving the time interval in seconds. It is also possible to instruct the browser to fetch a different URL when the page is refreshed by including the alternative URL in the content parameter. By setting the refresh time interval to zero (or a very low value), a meta refresh can be used as a URL redirection method.

<https://community.riskiq.com/search/www.donaldjtrump.com/hostpairs>

On the right side under **▼ CAUSE** click the check icon next to meta.refresh. This will filter the results to show just host pairs that were caused by meta.refresh.

The screenshot shows the RiskIQ community search interface. The search query is `www.donaldjtrump.com`. The results are filtered by the **CAUSE** `meta.refresh`. The table displays the following data:

Parent Hostname	Child Hostname	First	Last	Cause	Tags
fascistfortrump.com	www.donaldjtrump.com	2020-09-11	2020-11-09	meta.refresh	
flyfortrump.com	www.donaldjtrump.com	2020-10-10	2020-11-08	meta.refresh	
mail.fascistfortrump.com	www.donaldjtrump.com	2020-10-30	2020-10-30	meta.refresh	
fascistfortrump.com.mickmcdonald.a2hosted.com	www.donaldjtrump.com	2020-10-30	2020-10-30	meta.refresh	
wwwbin.com	www.donaldjtrump.com	2020-10-01	2020-10-01	meta.refresh	
trumpsupportsskkk.com	www.donaldjtrump.com	2020-09-10	2020-09-15	meta.refresh	
joeshtiden.com	www.donaldjtrump.com	2020-09-02	2020-09-02	meta.refresh	
www.blankrefer.com	www.donaldjtrump.com	2018-07-22	2018-07-22	meta.refresh	Phishing Riskiq Blacklist
www.prepareyouranus.com	www.donaldjtrump.com	2018-07-04	2018-07-04	meta.refresh	
blankrefer.com	www.donaldjtrump.com	2016-11-10	2016-11-10	meta.refresh	Phishing Riskiq Blacklist

The left sidebar shows the filter **CAUSE (10 / 786)** with `meta.refresh` selected. The right sidebar shows the filter **CHILD HOSTNAME (10 / 474)** with `www.donaldjtrump.com` selected.

topLevelRedirect

This is a redirection to the top-level domain. For example, if you owned two domains example.com and also exmaple.com (common misspelling), you could do a top-level redirect of exmaple.com to go to example.com. This would help users that typed the domain incorrectly to get to the appropriate domain.

<https://community.riskiq.com/search/joebiden.com/hostpairs>

On the right side under **CAUSE** click the check icon next to topLevelRedirect. This will filter the results to show just host pairs that were caused by topLevelRedirect.

The screenshot shows the RiskIQ community search interface. The search term is 'joebiden.com'. The results are filtered by 'CAUSE' to show 'topLevelRedirect'. The table displays the following data:

Parent Hostname	Child Hostname	First	Last	Cause	Tags
joebiden.com	errors.client.optimizely.com	2020-08-16	2020-11-09	topLevelRedirect	
joebiden.com	px.powerlinks.com	2020-04-21	2020-11-09	topLevelRedirect	
joebiden.com	sync.search.spotchange.com	2020-10-08	2020-11-09	topLevelRedirect	
store.joebiden.com	errors.client.optimizely.com	2020-07-28	2020-11-01	topLevelRedirect	
joebiden.com	bam-cell.nr-data.net	2020-11-01	2020-11-01	topLevelRedirect	
joebiden.com	api.js.mixpanel.com	2020-11-01	2020-11-01	topLevelRedirect	
store.joebiden.com	logx.optimizely.com	2020-08-12	2020-10-30	topLevelRedirect	
store.joebiden.com	pixel.tapad.com	2020-10-25	2020-10-25	topLevelRedirect	
store.joebiden.com	cm.g.doubleclick.net	2020-10-25	2020-10-25	topLevelRedirect	
joebiden.com	sync.go.sonobi.com	2020-10-22	2020-10-22	topLevelRedirect	
go.joebiden.com	ads.stickyadstv.com	2020-10-14	2020-10-14	topLevelRedirect	
go.joebiden.com	sync.taboola.com	2020-10-14	2020-10-14	topLevelRedirect	
go.joebiden.com	errors.client.optimizely.com	2020-08-09	2020-10-09	topLevelRedirect	
store.joebiden.com	uipglob.semasio.net	2020-10-08	2020-10-08	topLevelRedirect	
joebiden.com	ldis-sync.com	2020-09-19	2020-10-08	topLevelRedirect	
joebiden.com	uipus.semasio.net	2020-10-08	2020-10-08	topLevelRedirect	
joebiden.com	stats.g.doubleclick.net	2020-10-08	2020-10-08	topLevelRedirect	
joebiden.com	www.google-analytics.com	2020-09-21	2020-10-08	topLevelRedirect	
store.joebiden.com	x.bidswitch.net	2020-10-08	2020-10-08	topLevelRedirect	
joebiden.com	liadm.com	2020-10-08	2020-10-08	topLevelRedirect	
go.joebiden.com	match.prod.bidr.io	2020-10-01	2020-10-01	topLevelRedirect	
joebiden.com	api.amplitude.com	2020-09-30	2020-09-30	topLevelRedirect	



RiskIQ, Inc.
22 Battery Street, 10th Floor
San Francisco, CA. 94111

✉ sales@riskiq.net
☎ 1 888.415.4447

Learn more at riskiq.com

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