

Fraud firewall (FFW) (By Business Intelligence Team)

- **Goal:** Improve traffic quality; closer cooperation with our marketing/affiliate partners in order to buy more targeted traffic and improve its quality.
- We have created our own antifraud system called “Fraud Firewall” (FFW);
- Our long time dating site experience has allowed us to collect and overview different types of fraud on our websites;
- Now we have a tool to prevent fraud and bots;
- The main purpose of our solution is to detect suspicious users, registered on our websites, such as: fraudulent users, bots and non-targeted traffic, to monitor the level of this traffic, and provide transparent and professional feedback about the traffic to our marketing/affiliate partners.

We analyze registrations by using two main sources of information:

- Our own databases with historical info about users;
- 3rd party tools used to get feedback about every registration:

ethoca™

51Degrees™

Google Analytics



TeleSign



ThreatMetrix



- Email (whether it is real or machine generated, suspicious domains, etc.);
- Phone number;
- IP address (as well as IP hidden by proxy);
- Device parameters;
- Payment activity on our sites;
- Browser data (user agent, language, screen, OS, etc.);
- User activity on our sites (logins, chats, etc.).

Blacklists

We have several years of experience in suspicious activity detection. As a result of this we have collated database of potential negative values of specific parameters (see below), which are now used as a black-list for registrations. These black lists are updated in real-time.

Typical black lists that we have: e-mail addresses, IP ranges of specific countries, phone numbers and specific details of the payment transactions made by customers.

Analytical triggers (based on customer`s activity)

We collect many information parameters about users and their behavior and use a set of logical rules to compare these parameters. Such method helps to detect botnet traffic and irrelevant traffic that is not efficient for our business.

Users activity on the site analysis includes:

- User IP ;
- Payments activity;
- User communication;
- Chargebacks, FRAUD and other negative payment history.

Proxy unmasking

Our technology in combination with using external databases helps us to detect proxies, VPNs, TORs and in some cases the real IP which is behind the proxy.

Device recognition

We collect device parameters to detect botnets and device manipulation activity.

FFW collects data

- Visit on LP (proxy and device checking)
- Registration
- Confirmation of email
- Login
- Chatting with other users
- Payment

FFW provides Fraud score

- Visit on LP (proxy and device checking)
- Registration
- Confirmation of email
- Login
- Chatting with other users
- Payment

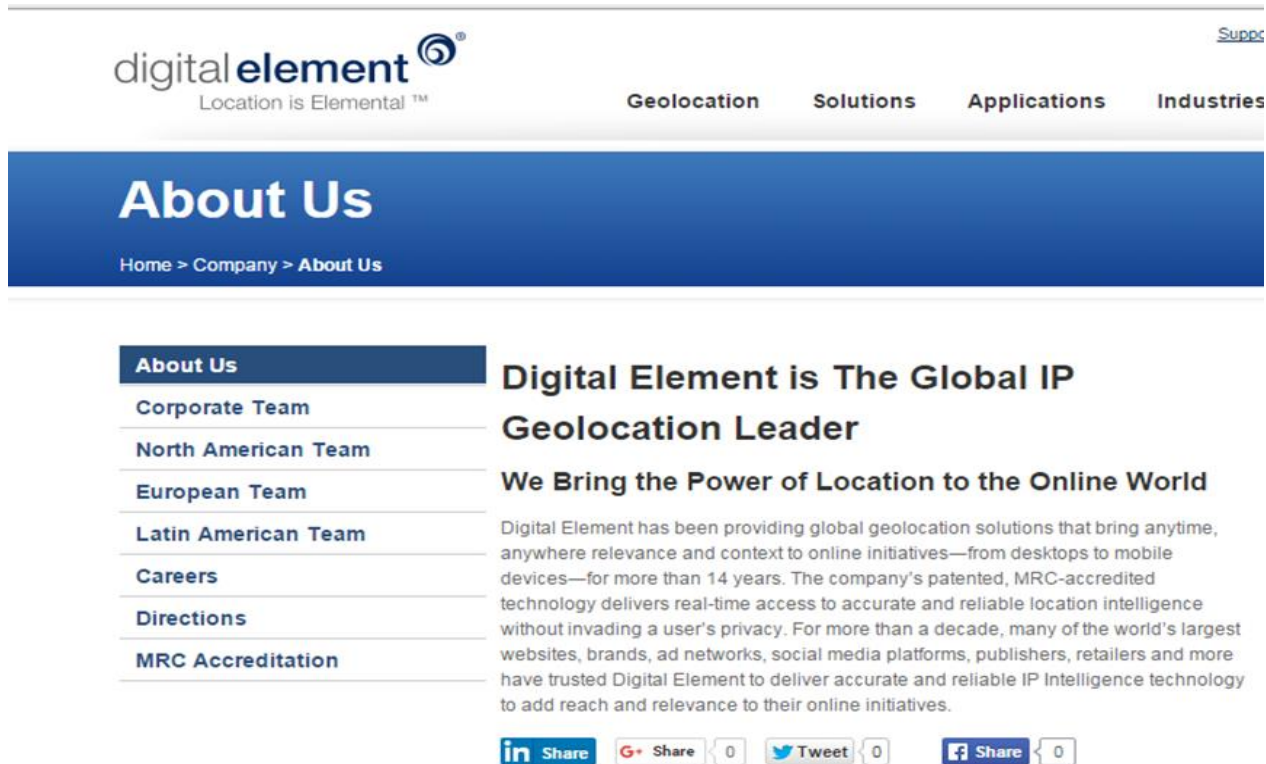
Example of the score calculation

Parameter	data	trigger which has load	score
userId	315f8547651d11e585d9101f74370270		
countryCode	AUS		
platformRegistration	mob		
dateReg	27.09.15 13:39		
dateConf	27.09.15 13:39		
reallp	1912884916		
realip_country	idn	real ip country is in blacklist, real ip country mismatch, hosting proxy	-100
email	halalu@inboxstore.me	suspicious email domain	-10
screenName	halalu		
language	id	browser language is in black list	-50
screenResolution	[[1280,800],[760,1280]]	screen resolution device mismatch	-80
platform	iPhone		
Summary score			-100

IP shows that country is Australia
Software that checks for proxy, says, that it is PROXY and IP behind the proxy is Indonesia and not Australia.

What our score means: low risk from 0 to -20 , middle risk from -21 to -79 and high risk from -80 to -100.

The latest IP addresses for hosting and anonymous proxies are provided by the well-known and reputable third party service (<http://www.digitalelement.com/>)



The screenshot shows the 'About Us' page of Digital Element. The header includes the company logo 'digital element' with the tagline 'Location is Elemental™' and a navigation menu with 'Geolocation', 'Solutions', 'Applications', and 'Industries'. A blue banner below the header contains the text 'About Us' and a breadcrumb trail 'Home > Company > About Us'. On the left side, there is a vertical menu with links to 'About Us', 'Corporate Team', 'North American Team', 'European Team', 'Latin American Team', 'Careers', 'Directions', and 'MRC Accreditation'. The main content area features the heading 'Digital Element is The Global IP Geolocation Leader' and a sub-heading 'We Bring the Power of Location to the Online World'. Below this is a paragraph of text describing the company's services. At the bottom, there are social media sharing buttons for LinkedIn, Google+, Twitter, and Facebook.

digital element[®]
Location is Elemental™

Support

Geolocation Solutions Applications Industries

About Us

Home > Company > About Us

- About Us
- Corporate Team
- North American Team
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- Latin American Team
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Digital Element is The Global IP Geolocation Leader

We Bring the Power of Location to the Online World

Digital Element has been providing global geolocation solutions that bring anytime, anywhere relevance and context to online initiatives—from desktops to mobile devices—for more than 14 years. The company's patented, MRC-accredited technology delivers real-time access to accurate and reliable location intelligence without invading a user's privacy. For more than a decade, many of the world's largest websites, brands, ad networks, social media platforms, publishers, retailers and more have trusted Digital Element to deliver accurate and reliable IP Intelligence technology to add reach and relevance to their online initiatives.

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What does it mean for you?

In your affiliate admin panel you will have already begun to see the following information:

A screenshot of a table from an affiliate admin panel. The table has 14 columns: Type, Commission, Total Cost, Created, Order ID, Site, Gender, IP, Status, Decline Reason, Country, Data1, Data2, Banner ID, and Fraud Score. A red arrow points from the top of the table to the Fraud Score column. The Fraud Score column is highlighted with a red border. The table contains four rows of data, all with a Status of "Pending".

Type	Commission	Total Cost	Created	Order ID	Site	Gender	IP	Status	Decline Reason	Country	Data1	Data2	Banner ID	Fraud Score
			2015-10-02 00:03:11	23c6c90e9f21686547550d20d5b1814		Payment	70.120.194.202	Pending		United States			0	0
			2015-10-02 00:11:24	438254acd7320eed69798804e7522321		Male	166.172.189.179	Pending		United States			0	0
			2015-10-02 00:26:07	550fe9ae6241ee450bca9d0d9938797		Male	207.68.228.65	Pending		United States			0	-10
			2015-10-02 00:29:07	9afa6116635f600105fa7aa5170f9e01		Male	66.59.246.225	Pending		United States			0	0

With this information we would like to start to work closer with you in terms of analyzing our traffic and improving its quality.

Thanks!