



Sender Reputation Basics

Brown Bag Learning Series



Agenda

- **Crash Course – Why Data Matters**
- **What Is Sender Reputation & Why Does It Matter**
- **Sender Reputation Data Sources**
- **Sender Score & SenderScore.org**
- **Sender Reputation Battle Card Recap**

Why Our Data Sources Are So Valuable





What Is Sender Reputation & Why Does It Matter

Let's Start With A Quiz

What is Sender Reputation?

- a) The way an ESP determines if a sender should be on a Dedicated or Shared IP.
- b) The way Data Protection Regulation laws determine if a sender is compliant.
- c) The way Mailbox Providers measure the trustworthiness of a sender's email.

What is a Sender Score?

- a) A numerical representation of the Sending Reputation.
- b) A Score a sender gets if they reach 1 million subscribers in a month.
- c) A numerical representation of the reviews senders get from their subscribers (ok, I was running out of ideas here)

What Is Sender Reputation?

Sender Reputation is the way Mailbox Providers measure the trustworthiness of a sender's email.

Sender Reputation is determined by measuring performance across key metrics that are important to Mailbox Providers and email subscribers, including: spam complaint rate, unknown user rate, volume, spam trap hits, and blocklisting.

A **Sender Score** is a numerical representation of the sending reputation.

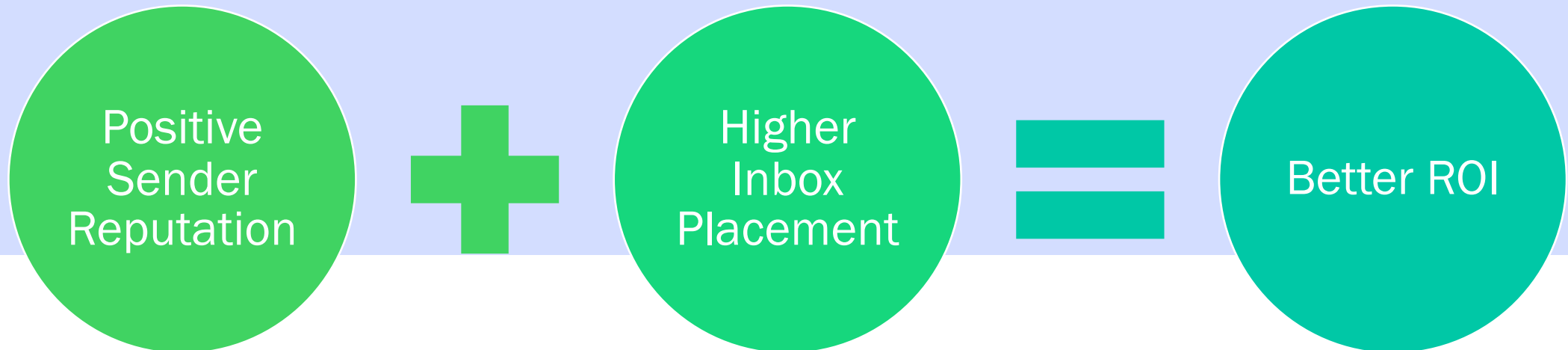
Scoring Metrics	
☰	
Volume	?
Unknown User Rate	?
Messages Filtered	?
Complaint Rate	?
Sender Rejected	?
Spam Traps	?
Infrastructure: Valid Host Type & rDNS	?

Why Does Sender Reputation Matter?

Mailbox Providers primarily use your Sender Reputation to determine if your email should be sent to the inbox, the spam folder or block it completely.

The goal is to get email delivered to the inbox, so subscribers can open them and act.

Email marketers with a good sender reputation will see higher inbox placement rates, and those with a poor sender reputation will often see their email get blocked or delivered to the spam folder.



Key Factors Of Sender Reputation



List Hygiene

WHO is in your Email Database



Subscriber Engagement

What those Subscribers DO with your Email

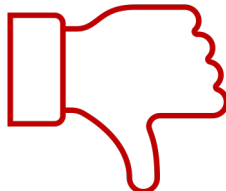
Measures Of Engagement



Positive engagement:

Marking your email as “not spam/junk/bulk”

Reading or replying to your email



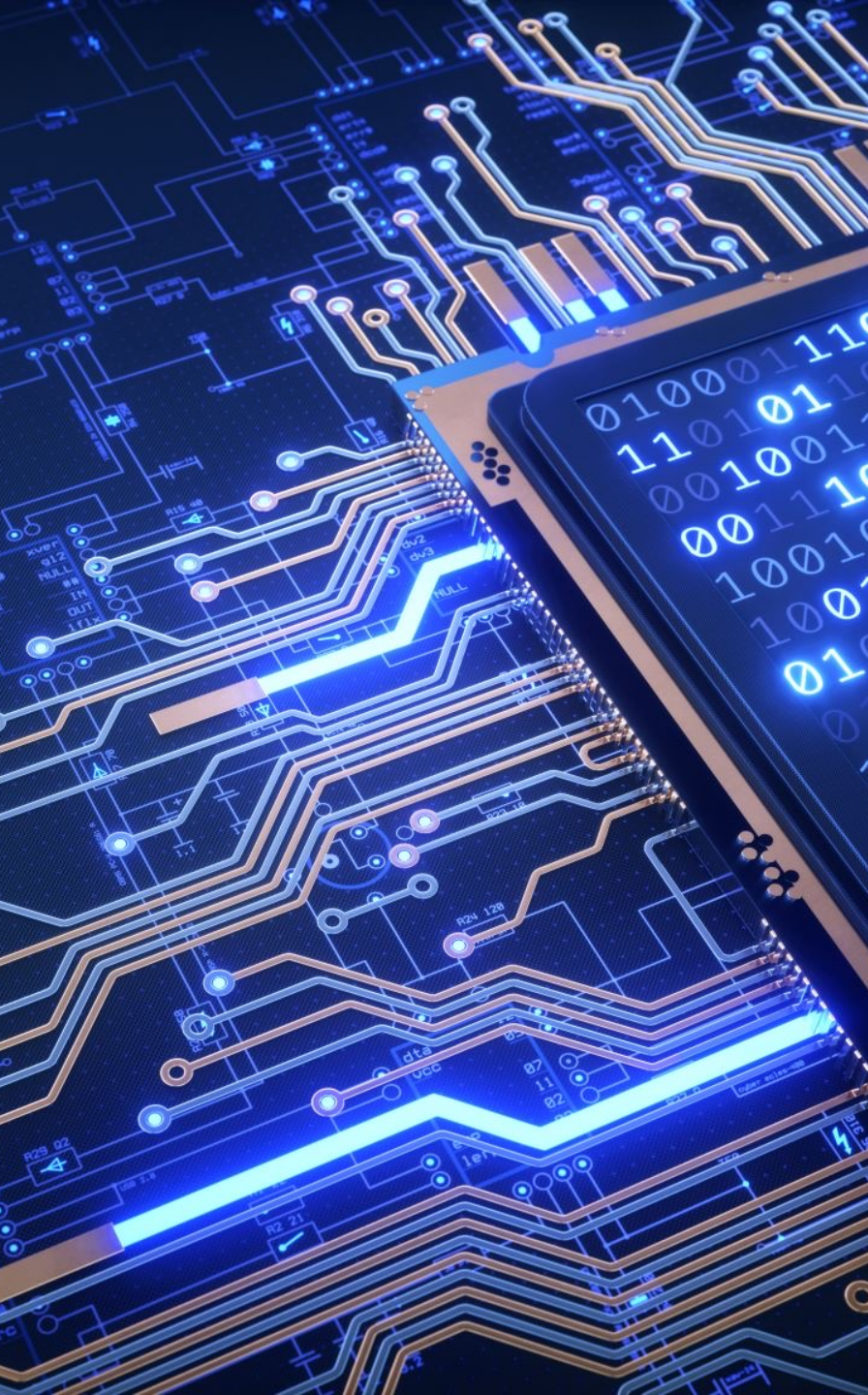
Negative engagement:

Marking your email as spam/junk/bulk (aka complaints)

Deleting your email without opening it



Sender Reputation Data Sources



Reputation Network (RepNet) Overview & Data Sources

The Reputation Network, or “RepNet” for short, is the combined data from all our data partners from which we can calculate how well behaved every sending IP in the world is, hence its “Reputation”. We obtain our data through a large network of sources, including but not limited to:

- Our FBL network where we can obtain ARFs/complaints
- Data partners that email us ARFs, complaints, traps, and TINS
- Data partners that upload aggregated volume data to us in the form of CSVs
 - This comes in through our API, mostly
 - Microsoft (MSOFT-CUSTOM-SRD) is an exception to this; despite our pleading they insist on emailing us their list instead.
 - Handled by a custom Haraka plugin that re-wraps the email body and sends it to our API
- Data partners that offer paid APIs:
 - [Yahoo's email feeds](#)
 - Cloudmark
- Threatwave is **not** part of the RepNet system but does drive the *RPBL.



Reputation Network (RepNet) Aggregate Processing

Our aggregate files are mostly uploaded to us by a public API. We have a series of jobs that will launch a Spark processor to read the files, tag them with metadata, and write them out as Parquet files according to one of our standard schemas. We also pay for a few aggregate feeds from Yahoo and Cloudmark. We retrieve the data from those partners through Airflow jobs that either call Cloudmark's API or fetch data from Yahoo's AWS account.

At regular intervals, dependent on the incoming data frequency, we launch process to read the inbound data. While we ask our partners to give us data in a standard format, they are not always willing or able to do so. Thus, we have many different parsers designed for each type of data format we receive.

These jobs start by splitting the data up as evenly as possible and working on the data in parallel. They read and validate each line in file, normalize date & time types, perform calculations if required, and tag the data with metadata. If an error occurs the job is aborted, and the original file is moved to manual debugging.



Feedback Loop Service

Overview of Universal Feedback Loop (uFBL):

Feedback loops between Senders and Receivers are one of the greatest collaborations in the email ecosystem, maybe the single greatest. Senders can receive information about users who complain about their messages by hitting a “spam” button, allowing them to remove those users from their list.

Validity provides a Feedback Loop platform for use by Mailbox Provider partners in the Data Cooperative. There are 31 partners using the FBL Platform today.

SSL certificates for FBL partner sites expiration

There are some FBL partner which SSL certificates are not under Validity’s management (AWS Certificate Manager), meaning that they will not be auto-renewed (i.e. they are marked as “Imported” in AWS Certificate Manager dashboard).

When an SSL certificate is expiring, we need to contact the partner to request a new certificate (a .pem file).



Sender Score



Sender Score Data Sources & Processing

The Sender Score is a report card that takes all the data from our Reputation Network, groups them into 6 buckets based on volume, and then scores every IP in each bucket from 0 to 100. It is based on the mathematical model of [cosine similarity](#) with additional secret sauce developed by Return Path data scientists.

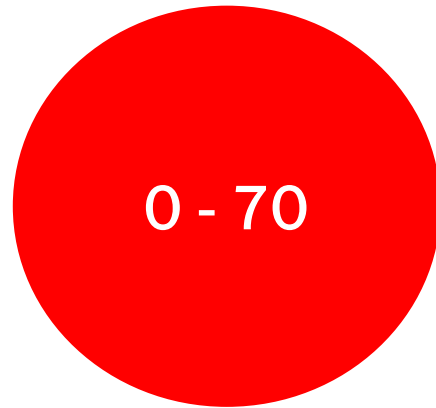
The data that comprises the Sender Score comes from our Reputation Network. This consists of traps, complaints, ARFs, and aggregated volume digests from our data partners and FBL network. Threatwave and Mailboxpark (merged with Threatwave as of April 2023) data are not currently part of the score.

Data is processed by the SenderScore airflow job in vfe-airflow.

- All data from the previous day is aggregated by IP and cleaned, a reverse DNS check is done, a regex classification is done (AKA [enemieslist](#)), that is combined with data from the previous 35 days, and finally run through the mathematical model to produce the scores. Sender Score is updated twice a day - once at 12:00 GMT and once at 22:00 GMT.
- An additional task loads the raw data from the senderscore.score_raw table and creates a 1-, 7-, and 30-day average view of the scores, keyed by IP for rapid lookup. After completion an additional Airflow job, Reputation Monitor Detailed History, goes on to create a trend rollup. We can show 365 days' worth of data (if we have it), viewable in 90-day chunks using the data switcher.

What Does My Sender Score Mean?

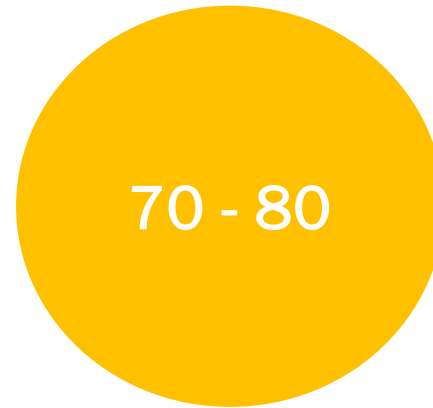
Whether you are on the high or low end of the Sender Score spectrum, there is always room for improvement.



0 - 70

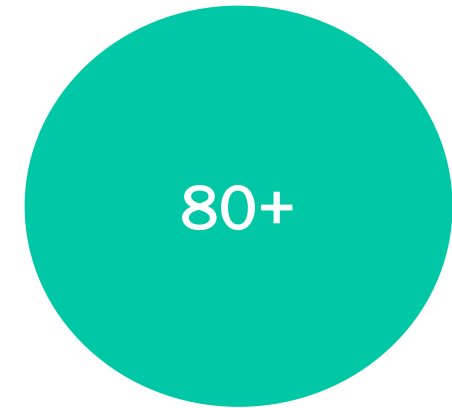
If your Sender Score is below 70, you need to repair your Sender Reputation. You need to understand the criteria Mailbox Providers use to determine which senders reach the inbox and how to improve your performance.

Your IP has been flagged for engaging in risky sending behaviors and your email performance could be suffering because of it.



70 - 80

You have a fine IP reputation score, but there's room for improvement. Continue to follow industry best practices and optimize your email program. Learn how to build and run an effective email program.



80+

A history of healthy sending habits has resulted in a great email reputation. Good senders can get recognized and rewarded for their sending and you may qualify for our Certification program, providing you preferential treatment at major Mailbox Providers – [learn more here](#).



Blocklists

If you've engaged in spam-like behavior and landed on a blocklist(s).



Complaints

The number of your recipients that are reporting your emails as spam.



Infrastructure

How well you've configured your systems that deploy and authenticate your emails.



Sender Rejected

The amount of your mail that was blocked at the MBP's gateway.



Messages Filtered

The amount of your mail that was accepted at the MBP's gateway, then filtered to spam or not delivered.



Spam Traps

The number of spam traps – aka emails created to catch spammers – your IP address hit in the last 7 days.



MBP Spam Rate

The percentage of your email that is delivered to the spam folder.



Unknown Users

How much mail you've sent to users who do not exist.



Fluctuations in Send Volume

If you've recently had any large fluctuations in the amount of mail you are sending.

SenderScore.org

SenderScore.org vs. Reputation Monitor

[SenderScore.org](https://www.sender.org/) is a web-based program that is available to anyone that signs up. Reputation Monitor is sold with the Everest platform. It is available in the client UI on the Reputation Monitor tab. The screen references Sender Score and is similar. But more information is available to the clients about what is impacting their scores and why scores may have changed.

Effective 2024, Validity started requiring individuals who make more than 10,000 DNS requests in a 30-day rolling window to register their IPs with us before they can make additional queries. If they do not register their IPs and continue to attempt to make queries, they will get an Excessive Queries error that will look something like this:

```
Reason: 554 5.7.1 Service unavailable; Client host [88.216.169.97] blocked
using query.bondedsender.org; Excessive Number of Queries | https://knowledge.validity.com/hc/en-us/articles/20961730681243.
```

In these cases, the fix is to have the client register at MyValidity (purchase).



Sender Reputation Battle Card Recap

FEATURE



SENDER REPUTATION

RESOURCES

- **Main competitors** include Kickbox, MailMonitor, Inbox Monster, SendGrid, Sparkpost, ZeroBounce. High variables in the quality and fidelity of the data from each of these players.
- Sender School Courses: [Sender Reputation](#).
- Blog: [Spam Traps: What They Are and How to Avoid Them](#)
- Reputation is best with additional Integrations setup to get a view from all available sources on one page. [Advanced Reputation Setup Guide](#)

Sender Reputation is about how you are perceived across MBPs. Are you trustworthy? A good reputation correlates to good deliverability and vice versa. Reputation is not just about Sender Score. It's impacted by many things across your campaign practices: Infrastructure, Audience, Content and Cadence. Everest provides the visibility into these all these areas so you can troubleshoot and correct to improve and maintain a good reputation. **Key areas (Reputation module) to get started in understanding/actioning your reputation:**

1. **Sender Score** – A good baseline metric to reference. If low score, you likely have issues across many MBPs. If high score, you may still have issues across MBPs including those you care about most. All providers incorporate the metrics in Sender Score. We provide additional tools to help you dig into the big ones (MSFT, Yahoo!, Gmail)
2. **Blocklists** – are you on any? 1) If so, it's an indication you have issues across any focus areas above (Infra, Audience, Content, Cadence) 2) view Blocklists so you can request to be removed.
3. **Spam traps** – Address list hygiene issues (audience). Recycled, Typo and Pristine traps indicate you may need to clean lists, reconsider recipients (engaged only) or you have acquired less than ideal lists.
4. **Complaints** – Gain visibility into complaints by timeline, subject line, IP and more so you can pinpoint which campaigns were most problematic.
5. **Infrastructure** – View any suspicious mail associated with your name that could easily affect your reputation.
6. **Integrate** additional tools into your Reputation module such as Google Postmaster Tools and MSFT SNDS to give even greater visibility into the largest MBP's. Leverage areas like Engagement (as it matter a lot!) to further assess how you are doing/where to improve.

VALUE PROPOSITION

OBJECTION HANDLING

My Sender Score is 100, but I am still getting very low Inbox Placement. How accurate is the Sender Score data?

- **Reflect:** why does the customer have this expectation, and how might they have gotten it? How might we do better educate them to take a 'whole picture' mentality?
- **Handle:** The email ecosystem is huge, with hundreds of MBPs sending, receiving, and using reputation signals between each other. It's not a question of accuracy, but of signal strength and presence in the filtering strategy of MBPs. **Sender Score is one of the strongest signals in the ecosystem—a higher score generally means higher inbox placement—and a key part of the filtering strategy for the vast majority of MBPs, but it is by no means the only signal.**

With so many signals at play, best practice is to take an 'all of the above' approach. Here are some key actions you can take to avoid this situation:

- First, spend time tending to the strong signals used to make filtering decisions, like Sender Score, SNDS, Postmaster Tools, Signal Spam, Spamhaus, and Engagement.
- Next, work with us to assess issues on weaker signals, knowing that un-addressed issues on weaker signals can develop into larger problems.

We are hitting Recycled and Pristine Spam Traps – why can you not tell us which email addresses are Spam Traps?

Our unique data feeds allow us to tell you the number of Spam Traps you are hitting by IP, even allowing you to differentiate between Recycled and Pristine Spam Traps. Whilst we can share this information, we cannot provide the actual email addresses that are spam traps, as this would defeat the purpose of having spam traps in the first place. Here are some best practices and [Tips for removing pristine and recycled spam traps from your email list.](#)

PROBLEMS TO SOLVE/CUSTOMER PAIN

TARGET RESPONSES

Problem: High or increasing **Complaint Rates**. **Question(s) to ask:** Do you know what action to take to reduce complaint rates? Are you monitoring your complaints via any MBP provided feedback loops (FBL's)?

Best practice recommendations: enroll all IPs and domains in all **Feedback Loops** (uFBL, Gmail Postmaster Tools, Microsoft SNDS, JMRP) . Add complainers to a suppression list. Send relevant content to increase engagement. Send consistent volume and avoid large spikes or large sends to untested lists (**List Validation**) that may trigger corresponding spikes in complaints. See which campaigns generate the most complaint in **Inbox Placement**. **Certification** will give you insights into your SRD rates.

Problem: **Spam Traps**. **Question(s) to ask:** What is your current list hygiene policy? Are you still basing your suppression of opens? Would a list hygiene optimization project with our Pro Serve team be helpful to you?

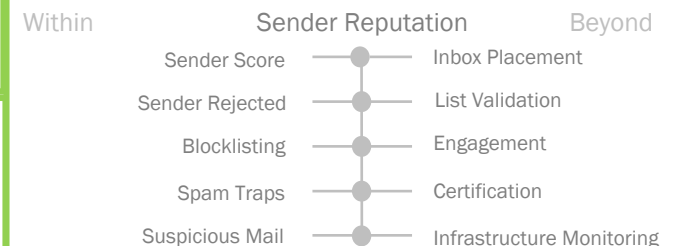
To avoid spam traps, senders should follow best practices, including sending email to consenting subscribers, maintaining good list hygiene, keeping sound email **infrastructure**, maintaining secure systems and databases. Reputation will tell you the number of Recycled and Pristine traps you are hitting. Use **List Validation** to verify the addresses on your sending list, including Typos.

Problem: **Blocklists**. **Question(s) to ask:** Do you know if you are being blocklisted and what to do to get off a blocklist? Do you know what it means to be on a blocklist, and what kind of signal it sends to mailbox providers?

IPs are commonly placed on blocklists because email from the IP address is going to spam traps operated by the blocklist and/or end user complaints tracked by the blocklist. To prevent getting placed on a blocklist, follow recommendations to reduce complaints and spam traps. Visit the blocklist owner website to help determine why they listed the IP and what steps need to be followed for removal. Check your **infrastructure** to ensure no open relays are present and it is secured.

Problem: **Engagement**. **Question(s) to ask:** Do you know what your subscribers do with your email and how that affects your reputation as a sender?

Many MBPs consider engagement in assessing reputation. Low engagement alone can result in a poor reputation signal at a MBP like Gmail. Negative engagement: marking as spam, deleting without opening, not reading (**Engagement Pixel**). Building a subscriber list with consent, crafting **content that is attractive** and in demand, **validating** your list on a regular basis, and suppressing low-engagement subscribers are all key practices that strengthen positive engagement and minimize negative engagement.



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Thank You!