NS8 Industry Report -Chargebacks

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1.1 Introduction

Chargeback Fraud is now a \$7 billion problem in the United States, and with even conservative estimates expecting this number to more than treble by 2020, more developed fraud solutions are needed to keep pace with these trends. Merchants nowadays need to rely less on their own processes and start looking more at utilizing real-time user scoring and machine learning solutions to be able to detect certain patterns among their users, identify risks for fraud, and reduce their overall potential losses.

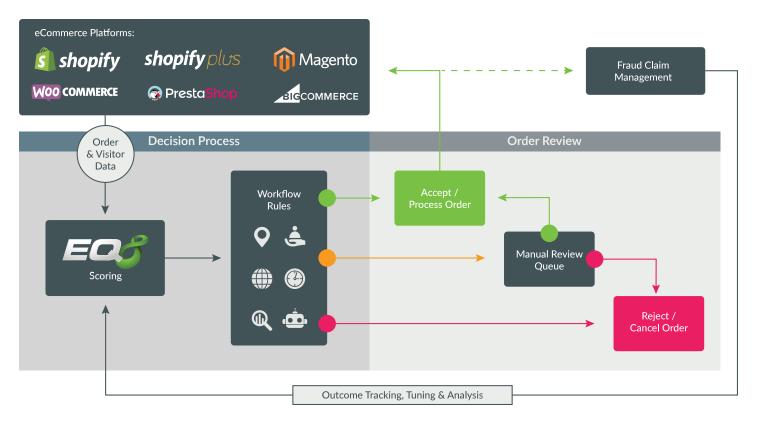
Chargeback fraud now accounts for one of the biggest segments of eCommerce fraud losses. A chargeback occurs when the customer demands that the bank return their money for a purchase. This can be due to a multitude of reasons, whether they are legitimate (perhaps a stolen credit card, or the goods were lost in shipping) or suspicious (exchanging an old item for a new, or trying to end up with both the product and the original amount that was paid).

In any case, the merchant not only has to return the charged amount, but they usually have to pay fees to the bank in question, so chargebacks can be a real drain on business revenue.

1.2 How Does NS8's Fraud Solution Work

NS8 Protect works by assessing site users, scoring them based on their potential likelihood for fraud, and then letting the merchant decide to accept/decline the order or submit verification for further authentication. Whenever a user approaches the storefront, it analyzes various metrics to assess their possibility of being a real customer, and identifies any discrepancies that might be indicators for fraudulent or suspicious activity.





The basic steps of NS8's solution are:

- Order Received The storefront receives an order from a potential customer with all their relevant transaction information, including their name, credit card details, billing information and so on. This forms the basis for the usual data most merchants use to assess potential fraud.
- EQ8 Score Several additional attributes are then considered by the fraud solution to determine a user's potential likelihood for fraud, with all the resulting data fed into the engine to create an EQ8 Score. The EQ8 score is a lot like a credit score, scoring users on a site from 1-1000 based on their likelihood for potential fraud. Obvious bots and known scammers score very low numbers (~100 or less) and good customers usually score considerably higher (800+), with different attributes raising or lowering the person's score accordingly.

Many different attributes are considered to determine the score, such as the user's IP address, country of origin, device usage, previous behavior, and so on. This is then combined with the transaction information above to give the merchant a picture of the overall risks and likelihood for fraud. Where the merchant might initially only have some 25 attributes at most to consider at the order stage, NS8 Protect considers over 150 to give a much more in-depth assessment.

Accept, Decline, or Review – At this step, the merchant is given the choice to accept/decline the order, or view all the details for further manual review. The merchant can choose to automate this process based on certain user behavior being detected following certain rules.

An example of how a rule works:

a. Automatically reject orders where the IP is routed through a data center. Legitimate customers don't tend to share their IP address with known data centers, so this is a common indicator of a scammer trying to mask their real IP.

b. If the user passes this check, the order is allowed and processed. If they fail, an alert is displayed on the dashboard, and the merchant can choose to reject it outright or consider further manual review.

 Manual Review and Verification – A transaction suspended for falling below a certain threshold can be set aside for further manual review. The merchant can see these transactions in the dashboard with a clear explanation as to why they were flagged as possible indicators for fraud.

Optionally, they can then choose to send the user a request for further verification via SMS or email. This is a good idea for "greyarea" cases where a user might display a few warning flags, and helps reduce the number of false positives (legitimate orders being declined for certain risk indicators when they shouldn't be).

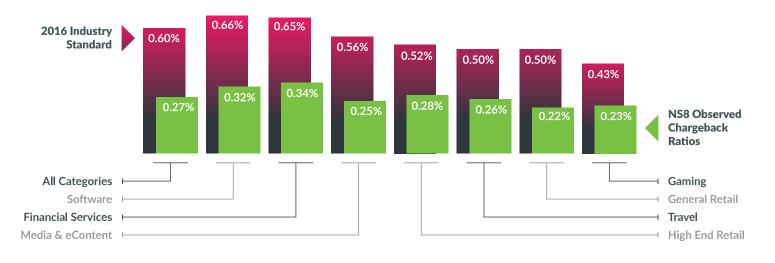
 Adjust Metrics and Rules – Based on the merchant's opinion on the effectiveness of the steps and outlined rules above, they can review the metrics considered and adjust what they consider as potential warning flags according to the needs of their individual business. For instance, a business with a lot of overseas shipping might want to lower the weight of that as a potential indicator for fraud. This can help a merchant optimize their rules configuration, and help them evolve their fraud prevention systems according to further data and new developments.



1.3 Results

By utilizing NS8 Protect, merchants can dramatically reduce their number of chargebacks by flagging suspicious users long before the order is even shipped or possible revenue can be lost.

We measured the efficacy of the transaction fraud protection capabilities of NS8 Protect over the course of 6 months, grouped by industry (as self-reported by the merchant and sales volume). Across all merchant sizes, platforms, and industries, there was at least a 186% improvement in chargeback ratio performance when NS8 Protect was enabled vs. the 2016 industry standard chargeback ratios. In each of the measured industry segments, NS8 Protect provided a reduction in chargebacks*. The industry segment that saw the greatest improvement was the high-end retail category, which was dominated by jewelry, electronics, and designer clothing merchants. This segment generally has lower volume but higher ticket items, and is at an outsized risk for chargebacks as a result. The travel segment, which is usually a high chargeback segment does not contain any travel carriers, lodging or sites that sell travel services other than local tours due to the makeup of our current customer base. The tour sub segment generally has lower fraud rate and chargeback ratio than the overall travel segment as a whole.



*Orders that resulted in chargebacks that were completed against the recommendations of the NS8 Protect product were excluded from the results.



1.4 Key Merchant Challenges

1.4.1 Complexity (Ease of Use) - Many fraud systems are too complex for an average merchant's capability because they require a lengthy integration process, a detailed setup of their configurations, or extensive training to make the most out of its features. This in turn presents a liability for their business because many merchants won't be interested in deploying a system that takes hours to setup and get working properly, and any failure to navigate the complexity of the system can leave them open to fraud if key features aren't enabled.

To tackle this problem, NS8 Protect is designed with an easy integration with most major platforms, so storeowners can take advantage of our one-click installation and be up and running in minutes. With a default "reporting-only" mode, merchants can see how fraud affects their business before either enabling a list of preset rules or choosing a set of their own they want to use.

The whole process only takes a very short time to setup, and the warning flags of potentially fraudulent orders (as well as why users received the scores they did) is clearly displayed on the dashboard with an explanation of each indicator, making it very easy to use. This system was clearly designed for the average end user in mind, yet with the scalable architecture and large array of rules to utilize, it can grow according to the needs of any business operation.

1.4.2 Awareness (Education) - It is widely known that many small and medium-sized businesses in eCommerce are often unaware of the extent of fraud problems or many of the solutions out there that can help them. Hackers, bots, and scammers are getting more sophisticated every year, and bringing to light the scale of the threat and being prepared to tackle these issues is a key challenge for many merchants.

This is why NS8 Protect not only identifies potential threats, but it even comes with clear explanations as to why this user might be a potential risk and how a storeowner can address any given situation. In conjunction with the ease-of-use (above), this ensures that merchants really feel like they can actually understand their fraud prevention setup and not feel overwhelmed by the various threats that are stacked against their business. **1.4.3 Cost (Affordability)** - The cost of different fraud prevention solutions varies widely, ranging from a few hundred dollars every month for small merchant protection capabilities to over \$100,000 every year for larger enterprise operations. Many businesses have also had to invest in extensive hardware or support architecture to get their protection service off the ground, which is why the market has largely moved on to SaaS (software as a service) solutions to overcome this initial capital investment hurdle.

Regardless of their chosen setup, this initial "sticker-shock" can deter many smaller merchants when exploring fraud prevention solutions, and several larger merchants can end up "overpaying" for their setup after worrying that cheaper options won't give them adequate protection or satisfy their needs. This is particularly true in cases where several vendors out there have reduced capabilities for cheaper plans, meaning that customers have to invest in premium options to unlock all of the features.

As a result, NS8 Protect was designed to offer comparable protection capabilities to those of much more expensive competitors at a significantly reduced price. Starting as low as \$100 a month, merchants don't have to worry about missing out on key features on lower price plans, and can take advantage of a full suite of protection capabilities that are built to scale with the size of any retail operation.

1.4.4 Optimization (Time) - Another issue that many merchants face is that they simply don't have time to invest in undertaking active fraud prevention measures, particularly when it comes to extensive manual review. Having extensive fraud capabilities in place is only so useful as a storefront's ability to use them, and many merchants have complained that fraud solutions that lead to too many false-declines or don't drastically reduce time spent in manual review are hard to find appealing.

For this reason, NS8 Protect can be quickly configured to only decline the orders that a given merchant wants, with as much or as little automation as they require. With a clear array of warning flags that highlight potential problems, manual review is usually very quick for the few "grey-area" cases that require



extra attention or verification, and with a seamless integration with the storefront, these orders can be accepted or declined in seconds. All of this combines together to dramatically reduce the time spent on manual review, allowing merchants to focus on the day-to-day operation of their business.

1.4.5 Flexibility (Integration with Other Systems) - With several different platforms out there on the market, one final key challenge that many merchants face is ensuring that their fraud prevention solution fits in with both their platform and any other systems that they might be running. Several merchants have expressed concerns that a fraud prevention solution would slow down their storefront and reduce their site performance, or otherwise interfere with the day-to-day running of their business.

NS8 Protect is implemented as a light weight client and server side API integration to a number of popular eCommerce platforms. As a result, its impact on site performance is negligible, and because it is integrated directly into the storefront, it can be easily run alongside other systems or applications that the owner might be running.

1.5 Conclusion

With each of these capabilities designed to tackle the concerns faced by modern eCommerce merchants, it is easy to see how NS8 can help storeowners reduce their chargebacks all while providing a positive user experience for the end customer. Using our extensive scoring capabilities and reviewing orders via the dashboard, our customers have been able to dramatically reduce their chargeback rates across the board, saving them both valuable time and money in the ongoing battle against transaction fraud.

Of course, chargebacks are just one example of how fraudulent users can attempt to scam an online business. This is why as well as helping merchants deal with this problem, NS8 Protect is designed to also help them reduce their advertising fraud or poor site performance. By providing a full array of protection capabilities, not only can businesses ensure that they are protected against the issues that they know of, but they can even discover valuable revenue saving opportunities elsewhere and safeguard themselves against other potential problems in the future.

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