

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

MAPLEBEAR INC., DBA INSTACART, a
Delaware corporation,

Plaintiff,

v.

JOHN DOES 1-2, CONTROLLING AND
OPERATING A MALICIOUS
APPLICATION KNOWN AS SHOPPER
HELPER,

Defendants.

Civil Action No: 1:21-cv-00474

**BRIEF IN SUPPORT INSTACART’S *EX PARTE* APPLICATION FOR AN
EMERGENCY RESTRAINING ORDER AND ORDER TO SHOW CAUSE RE
PRELIMINARY INJUNCTION**

Plaintiff Maplebear, Inc. dba Instacart (“Instacart”) seeks an emergency *ex parte* temporary restraining order (“TRO”) and a preliminary injunction designed to halt the operation and to mitigate the distribution of an unauthorized iOS mobile application known as “Shopper Helper.” Defendants are engaged in distributing Shopper Helper, which is intended to profit off of Instacart’s proprietary software and trademarks and illegally access Instacart’s computer networks to obtain order batch information. Defendants have leveraged verbatim copying of Instacart’s legitimate Shopper Application (“Shopper App”) and misused Instacart’s intellectual property to create a copy-cat mobile application. This is by design: Shopper Helper masquerades as Instacart’s genuine Shopper App for the purpose of circumventing Instacart’s technological counter-measures protecting its proprietary code and order batch data.

Shopper Helper builds upon Instacart’s Shopper App’s existing functionalities by adding unauthorized features, including automatic batch selections and additional batch filtering criteria. Through its misuse of Instacart’s software, Shopper Helper disrupts the distribution of batches

among Instacart's independent contractors who shop for and deliver groceries and other retail items to Instacart's customers ("Shoppers"). Shopper Helper seeks to give its users an unfair advantage that harms legitimate Instacart Shoppers. By circumventing Instacart's batch algorithm, the Shopper Helper app can cause Shoppers using the legitimate Instacart Shopper App to miss out on opportunities for batches that would otherwise be available to them. To manage Shopper Helper, Defendants have established and operate a network of Internet domains (*i.e.*, websites), an IP address and an e-commerce account on the Internet. Defendants use this infrastructure to distribute the application to the public, wrongfully obtain and use Instacart's authentication credentials, and surreptitiously access Instacart's servers containing batch data underlying Instacart's authentic Shopper App.

Defendants cause substantial harm by infringing and misusing Instacart's trademarks, which misleads Instacart's Shoppers and the public into believing that Shopper Helper is associated with Instacart. In this way, Defendants deceive the public into believing Instacart either created or condones the unauthorized, automated batch selection and filtering functionality, which impairs the experience of Instacart's Shoppers using the legitimate Shopper App. Defendants' misuse of Instacart's trademarks causes confusion and dilutes and harms Instacart's reputation and goodwill. Instacart therefore requests a TRO directing the disablement of the Internet infrastructure, which will cut communications between Defendants and the mobile devices containing the unauthorized software and disrupt the Defendants' ability to distribute the fraudulent application, thereby halting the illegal activity that is harming Instacart, its Shoppers, and the public.

Ex parte relief is essential. Notice to Defendants would provide them with an opportunity to destroy, move, conceal, or otherwise make inaccessible the instrumentalities they use to direct the operation and the evidence of their unlawful activity. If they learn of the impending action, Defendants may attempt to abandon or decrease the use of that infrastructure and move to new infrastructure in order to continue efforts to distribute the malicious Shopper Helper application. In fact, through Instacart's investigation efforts, Defendants recently relocated Shopper Helper to

new infrastructure to distribute Shopper Helper, thus necessitating *ex parte* relief. Giving Defendants another opportunity to relocate their infrastructure would enable them to continue their illegal activities and render further prosecution of this lawsuit entirely fruitless. Indeed, Defendants recently indicated to the public that they intend to expand their operations through the release of Shopper Helper for Android-based devices and by offering a new subscription service. Due to the volume of Android devices, Defendants' recent announcement could substantially increase Instacart's exposure to harm and further dilution of their brand, reputation, and goodwill.

This type of requested *ex parte* relief is not uncommon when disabling online infrastructure used by unidentified Defendants for illegal operations and digital fraud schemes. Courts reviewing cases that involve similar plaintiffs and similar defendants have granted such relief and adopted an approach where:

1. The Court issued a tailored *ex parte* TRO, including provisions sufficient to effectively disable the harmful digital crimes infrastructure, preserve all evidence of its operations and stop the irreparable harm being inflicted on plaintiffs;
2. Immediately after implementing the TRO, plaintiff undertook a comprehensive effort to provide notice of the preliminary injunction hearing and to effect service of process on Defendants, including Court-authorized alternate service by email, electronic messaging services, mail, facsimile, publication, and treaty-based means; and
3. After notice, the Court held a preliminary injunction hearing and granted the preliminary injunction in order to ensure that the harm caused by the digital crime's infrastructure would not continue.

See e.g. Sophos v. John Does 1-2, No. 1:20-cv-502 (E.D. Va. 2020) (O'Grady, J.); *Microsoft Corp., et al. v. John Does 1-2*, No. 1:20-cv-1171 (E.D. Va. 2020) (Trenga, J.).¹

¹ *See also Microsoft v. John Does 1-27*, No. 10 Civ. 156 (E.D. Va. 2010); *Microsoft v. John Does 1-11*, No. 11 Civ. 222 (W.D. Wa. 2011); *Microsoft v. Piatti, et al.*, No. 11 Civ. 1017 (E.D. Va. 2011); *Microsoft Corp. et al. v. John Does 1-39, et al.*, No. 12 Civ. 1335 (E.D.N.Y. 2012); *Microsoft Corp. v. Peng Yong et al.*, No. 12 Civ. 1004 (E.D. Va. 2012); *Microsoft Corp. v. John Does 1-18 et al.*, 13 Civ. 139 (E.D. Va.); *Microsoft v. John Does 1-82 et al.*, No. 13 Civ. 319 (W.D.N.C. 2013); *Microsoft Corporation v. John Does 1-8 et al.*, No. 13 Civ. 1014 (W.D. Tex. 2013); *Microsoft et al. v. John Does 1-8*, No. 14 Civ. 811 (E.D. Va. 2014); *Microsoft v. John Does 1-3*, No. 15 Civ. 240 (E.D. Va. 2015); *Microsoft v. John Does 1-5*, 15 Civ. 65675 (E.D.N.Y. 2015); *Microsoft Corporation v. John Does 1-2*, 16 Civ. 993 (E.D. Va. 2016); *Microsoft v. John Does 1-2*, 19 Civ. 716 (D.D.C. 2019). The primary similarity between these

If the Court grants Instacart’s requested relief, immediately upon execution of the TRO, Instacart will make a robust effort in accordance with the requirements of due process to provide notice of the preliminary injunction hearing and to serve process on Defendants. Instacart will immediately serve the complaint and all papers in this action on Defendants, using contact information maintained by domain registrars, Internet hosting providers and e-commerce platform providers that host Defendants’ digital infrastructure reflected in **Appendix A**.

I. FACTUAL BACKGROUND

Instacart seeks to stop Defendants’ illegal conduct, including misuse of Instacart’s Platform, access to Instacart’s batch information from Instacart’s infrastructure without authorization, unauthorized use of authentication tokens generated by Instacart to perpetuate the fraudulent conduct, and the misuse of Instacart’s recognizable trademarks.

A. Instacart’s Services

Instacart, founded in 2012, operates a multi-sided technology and communications platform via the Instacart website and its smartphone applications (“Instacart Platform”). Declaration of Henry S. Levin in Support of Plaintiff’s *Ex Parte* Application for an Emergency Temporary Restraining Order and Order to Show Cause re Preliminary Injunction (“Levin Decl.”) ¶ 2. The Instacart Platform facilitates on-demand grocery and retail delivery services by connecting customers who wish to purchase grocery items from Instacart’s local retail partners with personal shoppers (“Shoppers”) who will shop for and/or deliver the orders. *Id.*

Instacart’s Shoppers are integral to the Instacart Platform. *Id.* ¶ 13. Their role is at the core of Instacart’s business and the services they provide are essential to its success. *Id.* Without enough Shoppers, customer confidence in their ability to receive fast and reliable deliveries would be compromised. *Id.* Maintaining a positive relationship with Shoppers is essential to Instacart’s success and it is committed to addressing issues that affect Shoppers’ ability to use

Microsoft cases and this matter is that in each Microsoft case the court recognized that the delay caused by establishing notice before issuing the TRO would be catastrophic to the plaintiff’s efforts to obtain complete relief. Instacart is in the same circumstance here.

the platform. *Id.*

Customers can order groceries and other retail products through Instacart’s website or through the Instacart customer mobile application. *Id.* ¶ 3 Accessing either the website or the app, customers can select a local retailer where shopping and/or delivery is available by a Shopper. *Id.* To accept and fulfill customer orders, Shoppers use a mobile application, the Instacart Shopper App (“Shopper App”) (available on Android or iOS devices), which is distinct from the Instacart customer app. *Id.* ¶ 4.

The Shopper App is the primary way that Shoppers interact with Instacart. *Id.* ¶ 15. The Shopper App provides an automated matching function using proprietary technology to offer customer orders to Shoppers. *Id.* Shoppers, who use the Shopper App to indicate their availability to receive and accept orders at their discretion, enter into written agreements to perform services as independent contractors. *Id.* Orders are offered to Shoppers in “batches” consisting of one or more orders to be shopped and delivered together. *Id.*

Instacart has developed complex algorithms to offer batches to available Shoppers, considering numerous factors including fairness to the Shoppers. *Id.* ¶ 16. Once the algorithm processes the batches, a Shopper can then review a list of available batches and accept or decline those batches based on the size of the orders (i.e., number of items to shop), batch payment amount, and the location of the retailer of the goods. *Id.*

Instacart’s servers and information contained in the Shopper App (e.g., batches of orders) are not open to the general public. *Id.* ¶ 6. Rather, each call to Instacart’s servers requires Instacart to authorize and permit the Shopper seeking to access Instacart’s servers to view orders on the Shopper App. *Id.* This is because Instacart’s servers are protected by sophisticated defenses designed to prevent unauthorized access and abuse, and which evaluate whether to grant each request made to Instacart’s servers. *Id.*

Instacart works hard to protect the integrity and security of its network and systems. *Id.* ¶ 7. Among other things, it employs an array of technological safeguards and barriers designed to prevent data scrapers, bots, and other automated systems from accessing and copying its data on

a large scale or from accessing its systems without proper authorization. *Id.* For example, Instacart deploys SMS verification and/or a password barrier to verify the user. *Id.* ¶ 8. When a user logs into the Shopper App, they are required to enter their password or request a temporary SMS verification number, which confirms the user's telephone number associated with their Shopper profile. *Id.* The information contained in Instacart's Shopper App (e.g., batches of orders) is behind this password or SMS verification barrier. *Id.* This is a built-in security system controlling access to Instacart's servers and orders managed by the Instacart Platform. *Id.* Because the Shopper App is authentication protected, the general public is not authorized to access any data or information available on the Shopper App beyond the password or SMS verification barrier. *Id.* This technical security measure controls the integrity and quality of the Shopper App and protects sensitive information from public disclosure in accordance with Instacart's license terms. *Id.*

In addition, Instacart uses a security authentication token to prevent unauthorized access to the Shopper App or any of its information. *Id.* ¶¶ 9-10. An authentication token allows users to confirm their identity in order to access an application. *Id.* ¶ 9. Each time a Shopper enters their credentials in the Shopper App, the Shopper's mobile device will connect with an authentication server to verify the Shopper's credentials. *Id.* ¶ 10. Once the Shopper's credentials have been verified, the Shopper can access the legitimate Shopper App and Instacart's associated servers. *Id.* Each Shopper's access token will be disabled once the Shopper logs out of the application. *Id.*

B. Instacart's Shopper App's Terms of Service Prevents Use of Automated Tools and Copying of the Shopper App

The creators of Shopper Helper designed it specifically to deploy unauthorized filtering and automated selection functionalities on Instacart's Shopper App. Instacart does not sell ownership rights, copyright, or other intellectual property rights to its Shopper App. Instead, Instacart's Shoppers must obtain a license, which grants Shoppers limited rights to install the Shopper App and to access and use the Shopper App, including accessing and viewing batches of orders, subject to Instacart's technical security measures. *Id.* ¶ 5; *see also* Declaration of Dylan

Tonti in Support of Instacart’s Application for an Emergency *Ex Parte* Temporary Restraining Order and Order to Show Cause re Preliminary Injunction (“Tonti Decl.”) at ¶¶ 2-3, Ex. A. Prospective Shoppers who creates a Shopper account to use the Shopper App must accept the Shopper App’s Terms of Services (“Shopper App Terms”). *Id.* at ¶ 10; Levin Decl. ¶ 12.

As part of the current sign-up flow to create a Shopper account, shown below in **Figure 1**, Instacart unambiguously informs the prospective Shopper that “[b]y signing up, you agree to Instacart’s Terms and conditions and acknowledge you have read the Privacy policy.”

Sign up

First name Last name

E-mail

Phone

ZIP or postal code

Referral code (optional)

By signing up, you agree to Instacart's [Terms and conditions](#) and acknowledge you have read the [Privacy policy](#). By providing my phone number above, I agree and consent to receiving text messages from Instacart. Message and data rates apply. Consent not required to buy. Messages may be autodialed. Message frequency varies. Text STOP to Cancel.

[Create account](#)

[Already a shopper? Log in](#)

Figure 1

Instacart’s operative Shopper App Terms explicitly state that Instacart owns all trademarks, copyrights, database rights, patents, and other intellectual property rights of any nature in the Shopper App, together with the underlying software code. *See* Tonti Decl. ¶ 4, Ex. 1, § 2.1. The Shopper App Terms explicitly prohibit anyone from “reproduc[ing] [the Shopper App] in any form or by any means,” and each Shopper agrees “not to modify, rent, lease, loan, sell, distribute, or creative derivative works based on the Shopper App in any manner, and you shall not exploit the

Shopper App in any unauthorized way whatsoever, including, but not limited to, by trespass or burdening network capacity.” *Id.* at ¶ 5, Ex. 1, § 2.1. Further, while the Shopper App Terms grant the right to a range of permissible uses, each party creating a Shopper account specifically agrees that he or she can only use the Shopper App subject to several conditions, including that the Shopper will “not make any automated uses of the Shopper App or the Instacart Platform or gain any other unauthorized access therewith.” *Id.* ¶ 6, Ex. 1, §§ 3.2(d)-(h).

C. Overview of Shopper Helper

Shopper Helper is an unauthorized third-party mobile application that runs on top of Instacart’s legitimate Shopper App. *See generally* Declaration of Adam Gayde in Support of Instacart’s Application for an Emergency *Ex Parte* Temporary Restraining Order and Order to Show Cause re Preliminary Injunction (“Gayde Decl.”). It is designed to execute the Shopper App’s core functionalities, but includes automatically filtering and selecting the ‘best batch’ for a user and bypassing the designed Instacart native batch selection and offering process. *Id.* ¶ 8. Shopper Helper includes, for example, technology that unfairly leverages filters, such as the geographic proximity of the grocery store, the delivery distance, and the earning potential, and automatically accepts orders in a manner that may prevent Shoppers using the legitimate Shopper App from accepting such orders. *Id.* Defendants have recently marketed the Shopper Helper app on social media, as shown in **Figure 2** below, as “the best tool to get high paying batches.”

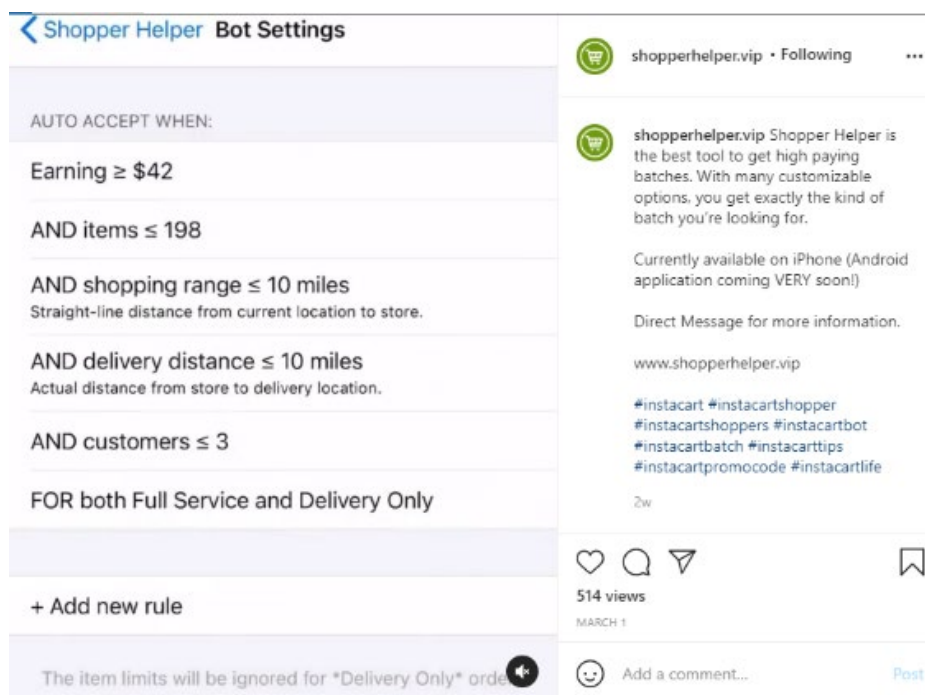


Figure 2

At present, Shopper Helper is exclusively available on Apple (iOS) mobile devices. But Shopper Helper has recently stated on social media an “Android application coming VERY soon!” *Id.* ¶ 10. Shopper Helper is not available on Apple’s App Store or Google Play and must be downloaded directly from the Shopper Helper website. Additionally, Shopper Helper requires any prospective user to contact Defendants or their agents through several different mediums to facilitate the downloading of the software, including Instagram direct messaging, Telegram, WhatsApp, or email. *Id.* ¶ 12.

Defendants offer Shopper Helper to the public through a subscription service. For example, a license to Shopper Helper can be obtained for various subscription durations with associated costs. *Id.* ¶ 13. The cost for a three-day subscription is approximately \$89, while the cost for a 15-day subscription is approximately \$249. *Id.* To obfuscate their identity, Defendants require potential users to pay for a subscription through cryptocurrency. *Id.* ¶ 14. Once Defendants receive payment, Defendants will provide a license key to the user to download Shopper Helper. *Id.* ¶ 17. The following **Figures 3, 4, and 5** show the subscription pricing, an email from Defendants

offering a three-day license to Shopper Helper, and an image of the cryptocurrency transaction to obtain a license to Shopper Helper.

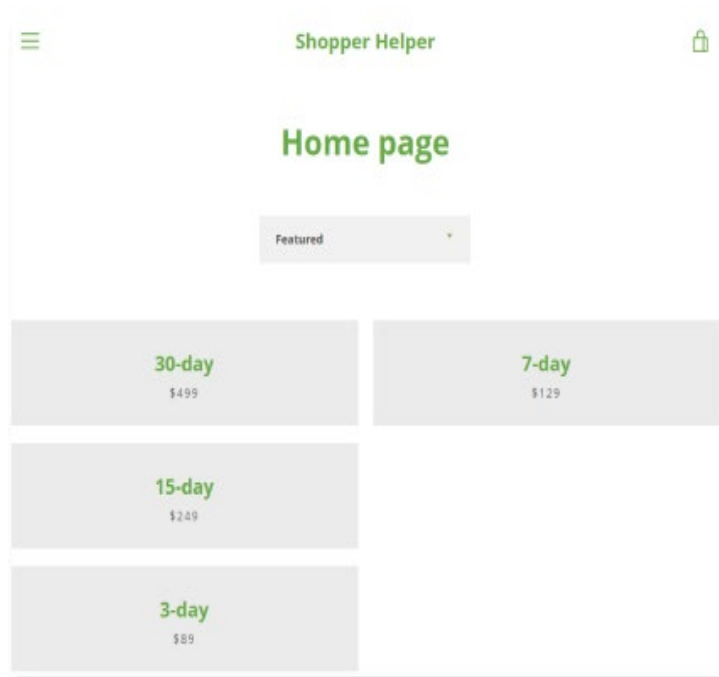


Figure 3

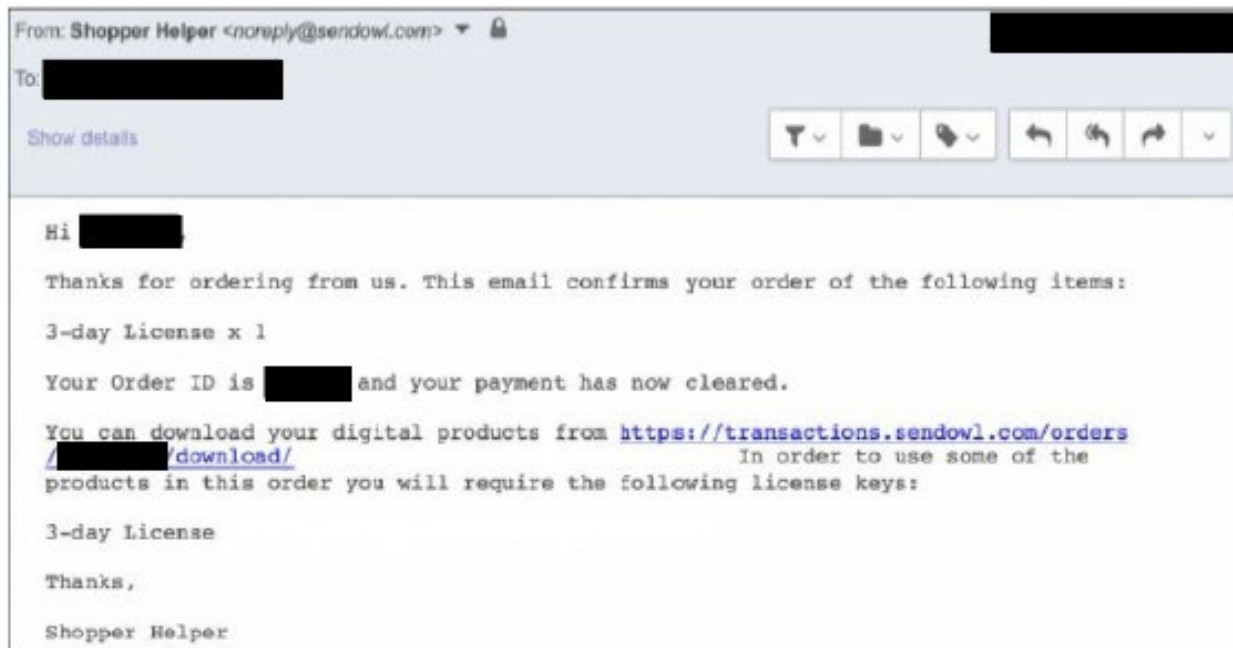


Figure 4

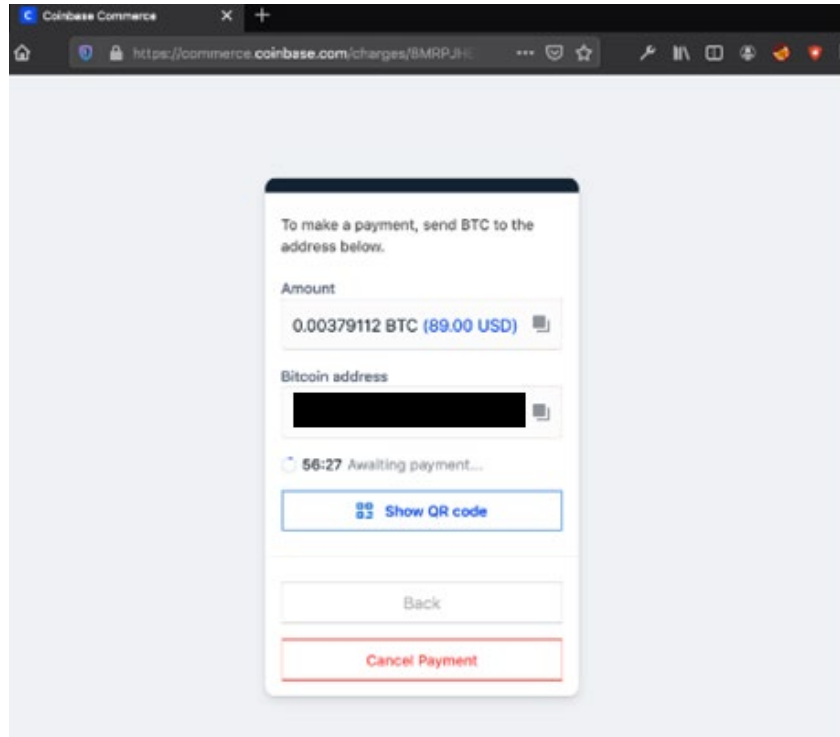


Figure 5

Defendants also provide instructions for installing Shopper Helper. Those instructions explicitly state that the user must “uninstall your original Shopper app.”, as shown in **Figure 6**. *Id.* ¶ 18. These instructions are hosted on the domain “shopperhelper[.]vip.” *Id.*

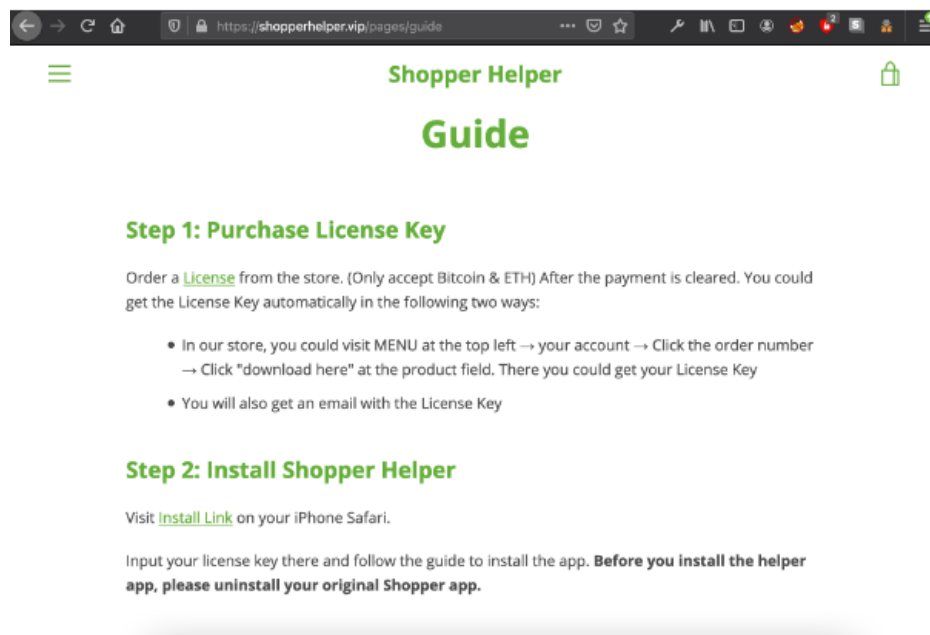


Figure 6

D. Shopper Helpers Unauthorized Access to Instacart’s Shopper App and Instacart’s Server Resources

The Shopper Helper app arrives on the user’s device with an Apple Certification. *Id.* ¶ 19. An Apple Certification is used to integrate applications into the iOS mobile operating system. *Id.* In effect, before an app can be installed on a device, it must be “signed” with a certificate issued by Apple that contains information about the developer. *Id.* The purpose of the Apple Certificate is to authenticate the developer – i.e., state that the developer of the mobile application is a trusted developer. *Id.* Applications that do not contain an Apple Certificate cannot install on an authorized and unadulterated Apple mobile device. *Id.* Shopper Helper has taken steps to obtain multiple Apple Certificates in order to obfuscate the true developer and to circumvent the normal authentication protocols that Instacart has in place. *Id.*

After it issues its Apple Certification and is granted permission to reside on the mobile device, Shopper Helper will reside on the device in a persistent memory referred to as namespace. *Id.* ¶ 25. In this particular instance, Shopper Helper is designed to reside within the same namespace as the authentic Shopper App. *Id.* ¶ 26. This process enables it to have the same access to authentication tokens and cookies. *Id.*

Because Shopper Helper has access to this token by virtue of the namespace, it is designed to present the token to Instacart’s systems and appear as the authentic Instacart Shopper App. *Id.* ¶ 27. This enables Shopper Helper to access Instacart’s systems and obtain information regarding batches of orders. *Id.*

Once installed, Shopper Helper requires users to enter their Instacart Shopper App credentials. *Id.* ¶ 28. At that point, Shopper Helper will transmit information through the Internet to call Instacart’s servers, hosted on Amazon Web Services (“AWS”), in order to obtain batch information. *Id.* Because Shopper Helper leverages authentic Instacart credentials, which it has intercepted without authorization, Shopper Helper is able to fraudulently circumvent Instacart’s technical measures that control access to Instacart’s AWS servers, intellectual property, and proprietary information including batch data. *Id.*

Shopper Helper prompts users to set criteria for batches they will accept, including the dollar amount of the order, distance from the shopper, and distance to the delivery destination. *Id.* ¶ 29. The Shopper Helper app will then use those rules to automatically accept any available batches that match the criteria. *Id.* This means that users of the Shopper Helper app are automatically assigned batches within seconds of them becoming available through Instacart, potentially before Shoppers using the legitimate Instacart Shopper App have the opportunity to view them. *Id.* The following **Figure 7** shows the criteria Shopper Helper makes available.

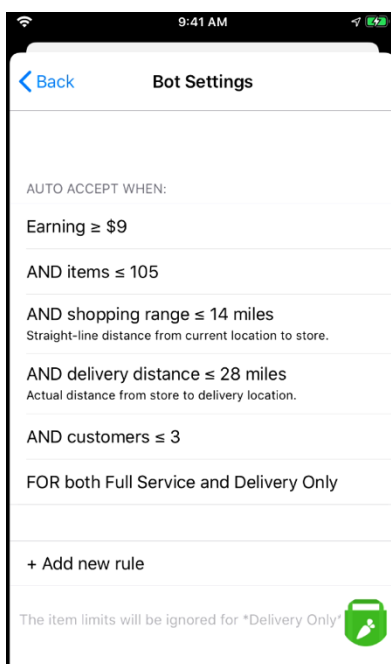


Figure 7

In addition to the automated batch functionality, Shopper Helper utilizes a capability called patching, which enables software developers to add components and functionality to existing binary code. *Id.* ¶ 23. Through patching, Defendants were able to create Shopper Helper, which essentially replicates Instacart's Shopper App functionalities and user interface. *Id.* In effect, Shopper Helper's technical architectural and utilization of patching tools enables Shopper Helper to act and appear virtually identical to the Shopper App by reproducing Instacart's intellectual property. As shown in **Figures 8** and **9** Shopper Helper appears to the public to be identical to

Instacart’s Shopper App because it uses Instacart’s trademarks, content and protected user interfaces, but it is instead a fraudulent, counterfeit and adulterated version of Instacart’s Shopper App. Levin Decl. ¶ 25.

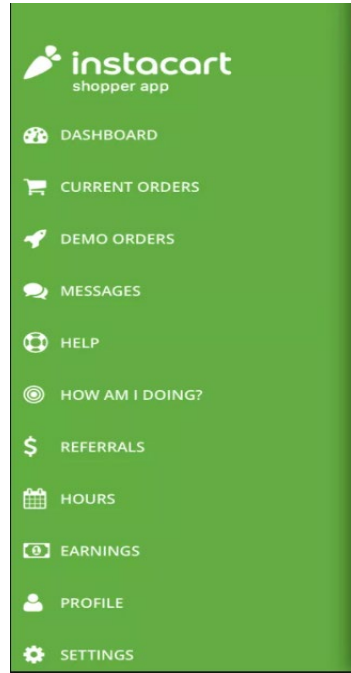


Figure 8 – Instacart’s Shopper Application

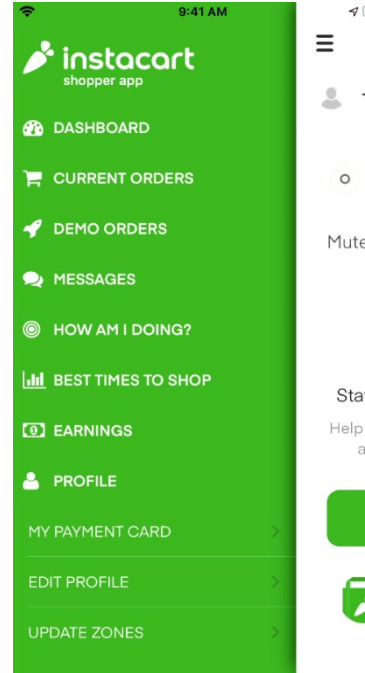


Figure 9 – Shopper Helper

Masquerading as Instacart’s genuine Shopper App, Defendants have added unauthorized functionalities to the Shopper App’s binary code, including additional filtering criteria and the automated selection functionality. Gayde Decl. ¶ 24. This means that Shopper Helper acts virtually the same as the Shopper App – i.e., allowing users to view batch orders, change their user profile, and access messages – but further includes the feature enabling Shopper Helper to automatically select certain orders. *Id.*

Shopper Helper leverages several web calls to an application programming interface (“API”) known as “LetsValidate” that enables Shopper Helper to validate that the application is still allowed to operate and access batch information from Instacart’s Shopper App without forcing the user to reauthenticate. *Id.* ¶ 30. This API call further enables Shopper Helper to

regularly update the user’s selection criteria for purposes of automatically selecting certain batches. *Id.* Shopper Helper stores this “LetsValidate” API on the domain “ssqian[.]vip.” *Id.* The following **Figure 10** shows how the Shopper Helper application makes a web call to “ssqian[.]vip” to validate that the application is still allowed to operate. *Id.*

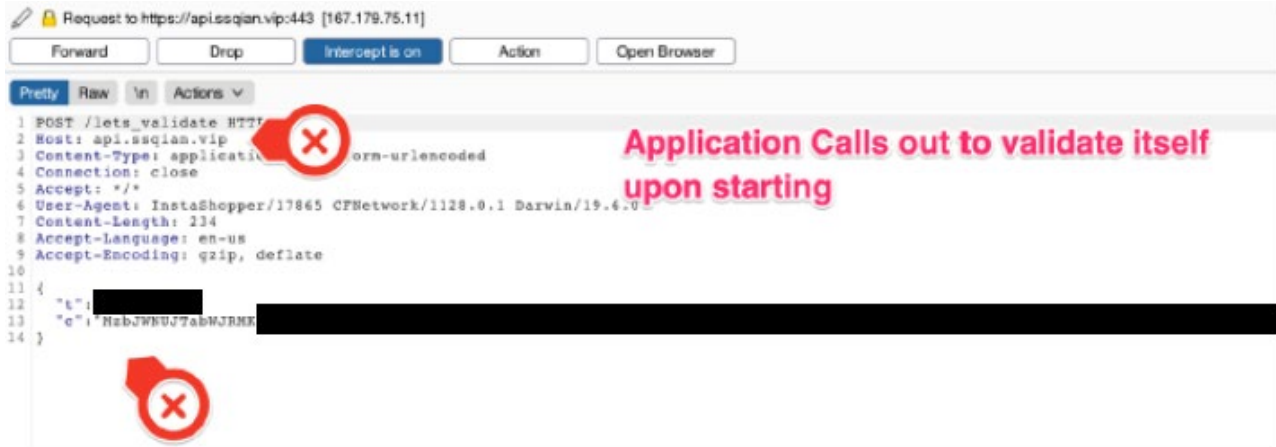


Figure 10

E. Defendants’ Digital Infrastructure

Defendants make the Shopper Helper app available through infrastructure comprised of Internet domains, an IP address, and an associated account within an e-commerce platform, reflected in **Appendix A**. *Id.* ¶ 16. Such domains include “shopper-helper[.]com,” “shopperhelper[.]vip,” and “ssqian[.]vip.” *Id.* An IP address can be thought of as the location on the Internet of a particular computer. *Id.* An “IP address” is a unique string of numbers separated by a period, such as “167.179.75.11,” which in this case is the actual IP address at issue that identifies Defendants’ computers attached to the Internet. *Id.* Defendants must lease such computers from companies that provide “hosting” services, and which assign to those computers particular IP addresses. *Id.* The hosting company refers to a type of company that specializes in offering computer hardware and software connection to the Internet, technical support, and other services to companies and individuals seeking to have some presence on the Internet. *Id.* Defendants also leverage an account on the e-commerce platform Shopify to support distribution of the fraudulent Shopper Helper app.

F. Shopper Helper Accessed Without Authorization Instacart’s Servers in the

Eastern District of Virginia

Through its investigation, Instacart has determined that Defendants have affirmatively targeted and accessed Instacart's servers located in the Eastern District of Virginia, to obtain batch information without authorization. The Shopper Helper application contains functionality that misuses code, features and functionality within the Shopper App, and which requires interaction with Instacart's AWS servers. Levin Decl. ¶¶ 21, 28. In particular, the Shopper Helper code that misuses Instacart authentication tokens and other technical measures, described above, requires interaction with Instacart's AWS servers to obtain batch information. *Id.* ¶ 21. When the Defendants utilized the Shopper Helper application, they necessarily accessed Instacart software, services and data to obtain batch from Instacart's AWS servers. *Id.*

G. Shopper Helper's Harm to Instacart and its Shoppers

Shopper Helper harms Instacart by accessing Instacart's servers to obtain batch information without authorization and disrupting the distribution of batches among Shoppers using Instacart's legitimate Shopper App. *Id.* ¶ 23. In doing so, Shopper Helper seeks to benefit from the fruits of Instacart's labor in developing and maintaining a complex algorithm for batch offering to Shoppers based on numerous factors including efficiency and fairness to Shoppers. Shopper Helper seeks to give its users an unfair advantage over Shoppers using Instacart's legitimate Shopper App. This causes dissatisfaction with Instacart's Shopper App and services and diminishes Shopper confidence in Instacart's Platform. *Id.*

a. Shopper Helper causes harm by making unauthorized changes to Instacart's Shopper App

Shopper Helper inflicts damage on Instacart whose products and trademarks Defendants systematically misuse as part of Shopper Helper's operations. Gayde Decl. ¶ 20. For example, once Shopper Helper is installed on a Shopper's mobile device, it compromises the underlying code of Instacart's Shopper App through the creation and operation of a counterfeit, adulterated version of the Shopper App. *Id.*; Levin Decl. ¶ 25. However, as described above, the compromised Shopper App does not appear any different to party viewing that app on the mobile device. *See*

supra. Anyone viewing the Shopper Helper app, thus, think that the compromised Shopper App, in the form of Shopper Helper, is developed and distributed by Instacart, despite the fact that it is the operators of Shopper Helper that are compromising the Shopper App. Levin Decl. ¶ 24. This harms Instacart's reputation and goodwill among the public, and particularly among Shoppers who may incorrectly believe that Shopper Helper is sanctioned, sponsored, or associated in some manner with Instacart. *Id.*

Once downloaded, Shopper Helper makes an API wrapper call (a technical "hand-shake") to Instacart's infrastructure. Gayde. ¶ 21. An API wrapper is a tool designed to automate calling of certain functionalities from an underlying codebase. *Id.* In this instance, Shopper Helper's API wrap is designed to access Instacart's infrastructure to obtain batch information by appearing as the genuine Shopper App, which enables Shopper Helper to obtain information regarding batches directly from Instacart's infrastructure. *Id.* In addition, once Shopper Helper automatically selects the batch, Shopper Helper will transmit that information to Instacart's AWS servers to claim that batch as taken and thus remove it from Instacart's legitimate Shopper App. *Id.*

Once Shopper Helper makes the technical handshake with Instacart's infrastructure, Shopper Helper will appear to the user as Instacart's Shopper App with the Shopper Helper altered functionality. *Id.* ¶ 2s. However, this fraudulent version makes significant changes to Instacart's Shopper App by enabling Shopper Helper to fraudulently access Instacart's servers in order to obtain batch information, masquerading as the authorized Shopper App and enabling the use of automated filtering and selection of batches, as shown in **Figure 11**. *Id.* The functionality and subsequent disruption of Instacart's batch distribution process harms Instacart's Shopper App's functionality. Levin Decl. at ¶ 26.

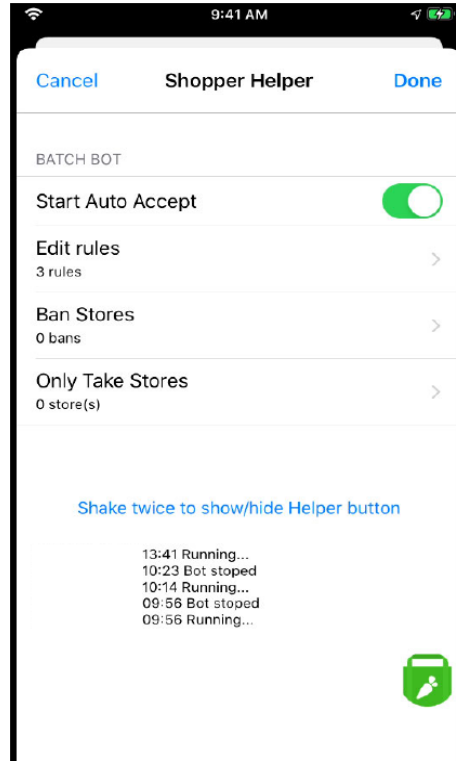


Figure 11

b. Shopper Helper causes severe harm to Instacart’s reputation, brands, and goodwill with its Shoppers and the public

Shopper Helper harms Instacart and Instacart’s Shoppers by damaging Instacart’s proprietary Shopper App installed on Shoppers’ mobile devices. *Id.* ¶ 31. Shopper Helper is specifically designed to run on mobile devices that at one point was equipped with Instacart’s Shopper App. *Id.* In fact, Shopper Helper cannot operate unless the user has at some point downloaded the Instacart Shopper app and created an account. *Id.* The Instacart Shopper App is licensed by Instacart to its users. *Id.* Once the Shopper creates an account with Instacart’s Shopper App, Shopper Helper will leverage the Shopper’s credentials (e.g., credential harvesting) in order to operate the counterfeit, adulterated version of the Instacart Shopper App. *Id.*

Instacart devotes significant computing and human resources to combating bots like Shopper Helper. *Id.* ¶ 32. Instacart, as the provider of the Instacart Shopper App, as well as other

products, must also incorporate security features in an attempt to stop installation of Shopper Helper and other bots. *Id.* Instacart has expended significant resources to investigate and track the Shopper Helper Defendants' illegal activities and to counter and remediate the damage caused by Shopper Helper to Instacart, its Shoppers, and the general public. *Id.*

Shopper Helper irreparably harms Instacart by damaging its reputation, brands, and Shopper goodwill. *Id.* ¶ 33. In effect, once altered and controlled by Shopper Helper, the Instacart Shopper App ceases to operate normally and becomes a tool for Defendants to conduct their unauthorized access to batch information on Instacart's servers and automated processes. *Id.* ¶ 34. Yet, they still bear Instacart's trademarks. *Id.* This misleads Instacart's Shoppers and the public generally into wrongly believing that Instacart condones, facilitates or somehow is associated with the use of Shopper Helper. *Id.*

Instacart has invested substantial resources in developing high-quality products and services. *Id.* ¶ 34. Due to the high quality and effectiveness of Instacart's products and services and the expenditures of significant resources by Instacart to market those products and services, Instacart has generated substantial goodwill with its Shoppers, has established strong brands, and has developed the Instacart name and the names of its products and services into strong and famous world-wide symbols that are well-recognized within its channels of trade. *Id.* Instacart has registered trademarks representing the quality of its products and services and its brand, including Instacart®. *Id.*

Indeed, Instacart recently received multiple bug reports from users of the Shopper Helper app reporting issues with Shopper Helper to Instacart's engineering team. *Id.* ¶ 27. This harms Instacart by requiring Instacart to dedicate engineering resources to research the reports and also further demonstrates the confusion Shopper Helper causes to Shoppers and the public who believe Instacart sanctions, sponsors, or is otherwise associated with Shopper Helper. *Id.*

H. Disrupting Shopper Helper

Instacart's investigation into Shopper Helper has consumed significant company time and resources. For example, Instacart engineers have spent considerable time analyzing Shopper

Helper, its technical architecture, and attempting to identify Shopper Helper's developers. *See* Levin Decl. ¶ 29. Instacart's cost to investigate and identify disruption methods has exceeded \$5,000. *Id.* ¶ 30.

Vulnerable points in Defendants' operations are the three Internet domains, one IP address and one e-commerce account through which Shopper Helper is operated and made available. *See* Gayde Decl. at ¶ 31, Ex. 2.

Granting Instacart possession of these domains, disabling the IP address and disabling the e-commerce account will enable Instacart to prevent their use to support the fraudulent Shopper Helper app and prevent the Shopper Helper Defendants from continuing their trespass of Instacart's servers, infringement of Instacart's trademarks, and harm to Instacart's users. *Id.* ¶ 32. In addition, disabling this infrastructure would disrupt the Defendants' ability to distribute their unlawful application to other mobile devices. Disabling this infrastructure will directly disrupt current Shopper Helper distribution mechanisms, mitigating risk and injury to Instacart, its Shoppers, and the public. *Id.*

II. LEGAL STANDARD

The purpose of a preliminary injunction is to protect the status quo, to prevent irreparable harm during the pendency of a lawsuit, and to preserve the court's ability to render a meaningful judgment on the merits. *United States v. South Carolina*, 720 F.3d 518, 524 (4th Cir. 2013) (citations omitted). "Parties seeking a preliminary injunction must demonstrate that (1) they are likely to succeed on the merits, (2) they are likely to suffer irreparable harm, (3) the balance of hardships tips in their favor, and (4) the injunction is in the public interest." *Metro. Reg'l Info. Sys. v. Am. Home Realty Network, Inc.*, 722 F.3d 591, 595 (4th Cir. 2013) (citing *Winter v. Natural Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008)).

III. INSTACART'S REQUESTED RELIEF IS WARRANTED

This matter presents a quintessential case for injunctive relief. Defendants' conduct causes irreparable harm. Every day that passes gives Defendants an opportunity to further undermine Instacart's technology crucial to the success of its business. Unless enjoined, Defendants will

continue to cause irreparable harm to Instacart, its Shoppers, and the public.

A. Instacart is Likely to Succeed on the Merits of Its Claims

Even at this early stage in the proceedings, the record demonstrates that Instacart will be able to establish the elements of each of its claims. The evidence in support of Instacart’s TRO Application is based on the diligent work of experienced investigators and is supported by substantial empirical evidence and forensic documentation. In short, there is no legitimate dispute about what the Shopper Helper app is and the harm it causes to Instacart. Given the strength of Instacart’s evidence, the likelihood of success on the merits weighs heavily in favor of granting injunctive relief.

1. Defendants’ Conduct Violates the CFAA

Congress enacted the Computer Fraud and Abuse Act (the “CFAA”) specifically to address computer crime. *See, e.g., Big Rock Sports, LLC v. AcuSport Corp.*, No. 4:08-CV-159-F, 2011 WL 4459189, at *1 (E.D.N.C. Sept. 26, 2011). “Any computer with Internet access [is] subject [to] the statute’s protection.” *Id. Inter alia*, the CFAA penalizes a party that: (1) intentionally accesses a protected computer without authorization, and as a result of such conduct, causes damage, 18 U.S.C. § 1030(a)(5)(C); or (2) intentionally accesses a computer without authorization or exceeds authorized access, and thereby obtains information from any protected computer, 18 U.S.C. § 1030(a)(2)(C); or (3) knowingly causes the transmission of a program, information, code, or command, and as a result of such conduct, intentionally causes damage to a protected computer, 18 U.S.C. § 1030(a)(5)(A).

A “protected computer” is a computer “used in interstate or foreign commerce or communication.” *See Estes Forwarding Worldwide LLC v. Cuellar*, 239 F. Supp. 3d 918, 926 (E.D. Va. 2017). “The phrase ‘exceeds authorized access’ means ‘to access a computer with authorization and to use such access to obtain or alter information in the computer that the accesser is not entitled to obtain or alter.’” *Id.* at 923 (citing 18 U.S.C. § 1030(e)(6)). In order to prosecute a civil claim under the CFAA, a plaintiff must demonstrate loss or damage in excess of \$5,000. The CFAA defines loss as “any reasonable cost to any victim, including the cost of responding to

an offense, conducting a damage assessment, and restoring the data, program, system, or information to its condition prior to the offense, and any revenue lost, cost incurred, or other consequential damages incurred because of interruption of service.” *Sprint Nextel Corp. v. Simple Cell, Inc.*, No. CIV. CCB-13-617, 2013 WL 3776933, at *6 (D. Md. July 17, 2013) (citing 18 U.S.C. § 1030(e)(8)). “[D]amage . . . means any impairment to the integrity or availability of data, a program, a system, or information.” *Id.* (citing 18 U.S.C. § 1030(e)(11)). The Fourth Circuit has recognized that this “broadly worded provision plainly contemplates consequential damages” such as “costs incurred as part of the response to a CFAA violation, including the investigation of an offense.” *A.V. ex rel. Vanderhye v. iParadigms, LLC*, 562 F.3d 630, 646 (4th Cir. 2009). The CFAA permits plaintiffs to aggregate multiple intrusions or violations for the purposes of meeting the \$5,000 statutory threshold. *See Sprint Nextel Corp.*, 2013 WL 3776933, at *7 (citations omitted).

In sum, in order to prevail on their CFAA claim, Instacart must establish that Defendants (1) accessed a protected computer; (2) without authorization; (3) for the purpose of obtaining information or defrauding others; (4) resulting in loss or damage in excess of \$5,000. The Declarations of Henry S. Levin and Adam Gayde establish that Defendants’ conduct satisfies each of these elements. First, Shopper Helper has accessed a protected computer by accessing Instacart’s servers to obtain batch information. *See supra*; 18 U.S.C. § 1030(e)(2)(B) (defining “protected computer” as a computer “used in interstate or foreign commerce or communication”). Second, Shopper Helper has accessed Instacart’s servers without authorization. Shopper Helper intercepts authentication tokens created by Instacart and uses those tokens without Instacart’s permission to send queries to Instacart’s servers and to facilitate unauthorized access to those servers to obtain batch information. Third, Defendants have accessed Instacart’s servers in order to obtain Instacart’s order batch data to be misused by Shopper Helper. Finally, the amount of harm caused by Defendants exceeds \$5,000.

Defendants’ conduct is precisely the type of activity that the Computer Fraud and Abuse Act is designed to prevent. Courts in the Eastern District of Virginia have held that using

authentication credentials that do not belong to the individual accessing a computing facility constitutes unauthorized access. *Glob. Pol'y Partners, LLC v. Yessin*, 686 F. Supp. 2d 631 (E.D. Va. 2009) (holding that using a password to access an email account that did not belong to him and lacking a legitimate business reason to do so meant defendant acted without authorization within the meaning of the CFAA); *Hains v. Adams*, No. 3:19-CV-504 (DJN), 2019 WL 5929259 (E.D. Va. Nov. 12, 2019) (holding that plaintiff pled sufficient facts to allege a CFAA violation when defendant obtained her social media password without permission and used that information to access her social media, email, and online banking). In this case, authentication tokens generated by Instacart and presented as credentials for authorized access are analogous to unauthorized presentation of passwords and similar authentication mechanisms. These authentication credentials are assigned to Shoppers by Instacart through the Shopper App. In short, defendants, through Shopper Helper, are intercepting and using Instacart-generated credentials that are meant to be used only by the legitimate Shopper App to query Instacart servers.

2. Defendants' Conduct Violates the Lanham Act.

Shopper Helper is a mobile application through which Defendants use counterfeit Instacart trademarks, including but not limited to those attached as **Appendix B** to the Complaint. Defendants developed Shopper Helper to manipulate the underlying code of Instacart's Shopper App through the creation and operation of a counterfeit, adulterated version of the Shopper App. However, the compromised Shopper App does not appear any different to a party viewing that app on the mobile device. Anyone viewing the Shopper Helper app, thus, would think that the compromised Shopper App, in the form of Shopper Helper, is developed and distributed by Instacart, despite the fact that it is the operators of Shopper Helper that are compromising the Shopper App. This constitutes trademark infringement, trademark counterfeiting, false designation of origin, and dilution under Sections 1114, 1125(a), and 1125(c) of the Lanham Act. *See Microsoft Corp. v. John Does I-2*, Case No. 1:20-cv-01217-LDH-RER (E.D.V.A 2019), Dkt. 11 (granting temporary restraining order and holding that Defendants' use of Microsoft's trademarks to infiltrate and make changes to the Windows operating system is designed to cause confusion);

see also *JFJ Toys, Inc. v. Sears Holdings Corp.*, 237 F. Supp. 3d 311, 340 (D. Md. 2017) (citing 15 U.S.C. § 1114(1)(a)). Defendants reproduce and display copies of Instacart's registered, famous and distinctive trademarks in the Shopper Helper app, causing confusion among Shoppers.

A party is liable for trademark counterfeiting where: (1) the defendant intentionally used a counterfeit mark in commerce; (2) the defendant knew that the mark was counterfeit; (3) the use occurred in connection with the sale, offer for sale, or distribution of goods; and (4) the use of the counterfeit mark was likely to confuse consumers. 15 U.S.C. § 1114(1); *Match.Com, LLC v. Fiesta Catering Int'l, Inc.*, No. 1:12-cv-363, 2013 WL 428056, at *6 (E.D. Va. Jan. 31, 2013). The Lanham Act defines a counterfeit mark as "a spurious mark which is identical with, or substantially indistinguishable from, [the plaintiff's] mark." 15 U.S.C. § 1127 (2012); *Louis Vuitton Malletier S.A. v. Haute Diggity Dog, LLC*, 507 F.3d 252, 269 (4th Cir. 2007). A counterfeit mark does not have to be an exact replica, for that "would allow counterfeiters to escape liability by modifying the registered trademarks of their honest competitors in trivial ways." *United States v. Chong Lam*, 677 F.3d 190, 199 (4th Cir. 2012) (internal quotations and citation omitted).

Defendants have intentionally used Instacart's trademarks in commerce without authorization or license. Defendants have created a mobile application that once installed on a Shopper's mobile device, compromises the underlying code of Instacart's Shopper App through the creation and operation of a counterfeit, adulterated version of the Shopper App. *Id.* The foregoing acts establish Defendants' unauthorized use of Instacart's trademarks in commerce. And where a party produces counterfeit goods, there is a presumption of likelihood of confusion. See 15 U.S.C. § 1117(b)-(c) (2012); *Polo Fashions, Inc. v. Craftex, Inc.*, 816 F.2d 145, 148 (4th Cir. 1987).

In addition to constituting infringement and counterfeiting good under section 1114 of the Lanham Act, Defendants' conduct also constitutes false designation of origin under section 1125(a), which prohibits use of a registered mark that: is likely to cause confusion, or to cause mistake, or to deceive as to the affiliation, connection, or association of such person with another

person, or as to the origin, sponsorship, or approval of his or her goods, services, or commercial activities by another person. 15 U.S.C. § 1125(a)(1)(A); *see also Lone Star Steakhouse & Saloon, Inc. v. Alpha of Va., Inc.*, 43 F.3d 922, 930 (4th Cir. 1995) (“In order to prevail under §§ 32(1) and 43(a) of the Lanham Act for trademark infringement and unfair competition, respectively, a complainant must demonstrate that it has a valid, protectable trademark and that the defendant’s use of a colorable imitation of the trademark is likely to cause confusion among consumers.”). Shopper Helper’s use of Instacart’s trademarks causes confusion and mistakes as to Instacart’s affiliation with Shopper Helper. This activity is a clear violation of Lanham Act § 1125(a), and Plaintiff is likely to succeed on the merits. *See Automobili Lamborghini S.P.A. v. Garcia*, 467 F. Supp. 3d 385, 404 (E.D. Va. 2020) (finding trademark infringement because similarity between counterfeit marks and Lamborghini’s trademarks give rise to an undesired association between the marks); *Otels, Inc. v. Altun*, No. 1:11-cv-604, 2012 U.S. Dist. LEXIS 114584 (E.D.Va. August 14, 2012) (unauthorized online use of registered mark deemed likely to cause confusion among consumers, constituting trademark infringement); *Garden & Gun, LLC v. TwoDalGals, LLC*, No. CIV 3:08CV349, 2008 WL 3925276, at *1 (W.D.N.C. Aug. 21, 2008) (granting preliminary injunction against misleading use of trademarks under Section 1125(a)); *Brookfield Commc'ns, Inc. v. W. Coast Entm't Corp.*, 174 F.3d 1036, 1065 (9th Cir. 1999) (entering preliminary injunction under Lanham Act §1125(a) for infringement of trademark in software and website code); *Hotmail Corp. v. Van\$ Money Pie Inc.*, No. C 98-20064 JW, 1998 WL 388389, at *5 (N.D. Cal. Apr. 16, 1998) (granting preliminary injunction; copying the Hotmail trademarks in “e-mail return addresses” constituted false designation of origin; also constituted trademark “dilution” under §1125(c)).

Thus, Plaintiff is likely to succeed on the merits of their Lanham Act claims.

3. Defendants’ Conduct is Tortious

Defendants’ conduct is tortious under the common law doctrines of trespass to chattels, conversion, unjust enrichment, and intentional interference with contractual relationships. Under Virginia law, the tort of conversion “encompasses any wrongful exercise or assumption of

authority . . . over another’s goods, depriving him of their possession; and any act of dominion wrongfully exerted over property in denial of the owner's right, or inconsistent with it.” *Microsoft Corp. v. Does 1-2*, No. 1:16CV993, 2017 WL 5163363, at *5 (E.D. Va. Aug. 1, 2017), report and recommendation adopted, No. 1:16-CV-00993 (GBL/TCB), 2017 WL 3605317 (E.D. Va. Aug. 22, 2017); *see also Ground Zero Museum Workshop v. Wilson*, 813 F. Supp. 2d 678, 697 (D. Md. 2011) (holding defendant liable for conversion where defendant replaced current version of plaintiffs’ website with former version, because such action effectively “dispossessed [plaintiff] of the chattel;” i.e., its website). The related tort of trespass to chattels—sometimes referred to as “the little brother of conversion”—applies where personal property of another is used without authorization, but the conversion is not complete. *Id.*; *see also Vines v. Branch*, 418 S.E.2d 890, 894 (1992).

Here, Defendants have exercised dominion and authority of Instacart’s platform by intruding into its servers to obtain batch information. Defendants carried out this tortious conduct by fundamentally changing important functions on Instacart’s Shopper App, thus depriving Instacart of its right to control the content, functionality, and nature of its platform and services. District courts in the Fourth Circuit have recognized that this type of unauthorized intrusion can amount to tortious conduct under the doctrines of conversion and trespass to chattels. *See supra*; *see also Microsoft Corp. v. Does 1-18*, No. 1:13CV139 LMB/TCB, 2014 WL 1338677, at *9 (E.D. Va. Apr. 2, 2014) (“The unauthorized intrusion into an individual’s computer system through hacking, malware, or even unwanted communications supports actions under these claims”); *Microsoft Corp. v. John Does 1-8*, No. 1:14-CV-811, 2015 WL 4937441, at *12 (E.D. Va. Aug. 17, 2015). Further, Defendants’ conduct amounts to unjust enrichment because Plaintiff has demonstrated (1) Plaintiff conferred a benefit on the Defendants; (2) Defendants’ knowledge of the conferring of the benefit; and, (3) Defendants’ acceptance or retention of the benefit under circumstances that “render it inequitable for the defendant to retain the benefit without paying for its value.” *Microsoft Corp. v. John Does 1-8*, 2015 WL 4937441, at *12.

Additionally, Defendants’ conduct amounts to tortious interference with a contractual

relationship. Tortious interference with a contract under Virginia law requires “(1) the existence of a valid contractual relationship or business expectancy; (2) knowledge of the relationship or expectancy on the part of the interferor; (3) intentional interference inducing or causing a breach or termination of the relationship or expectancy; and (4) resultant damage to the party whose relationship or expectancy has been disrupted.” *Chaves v. Johnson*, 230 Va. 112 (1985). Instacart’s Shopper Application Terms of Service (the “Shopper App Terms”) prevent Shoppers from automating the functions of the Shopper App or Instacart Platform. *See* Tonti Decl. § 6. Any user of the Shopper App must agree to the Shopper App Terms and in using the Shopper App, shoppers who later downloaded Shopper Helper must have agreed to these terms, including terms prohibiting them from using any form of modifications, exploits, or other unauthorized means to interfere with, or gain undue advantage in the use of the Instacart Platform. In creating Shopper Helper, which reproduces the look and functionalities of the Shopper App, Defendants necessarily accessed the Shopper App and therefore knew the Shopper App is restricted by Instacart’s Shopper App Terms. Nevertheless, Shopper Helper induces users to modify the legitimate Instacart Shopper App by introducing the added functionality of automatically searching for and accepting batches. In addition, Shopper Helper disrupts the normal operation of Instacart’s Platform – i.e., Instacart’s complex algorithm to offer batches to available Shoppers – through its automated feature. The Shopper Helper app can cause Shoppers using the legitimate Instacart Shopper App to miss out on opportunities for batches that would otherwise be available to them. Thus, Shopper Helper induces Shoppers to disrupt their contractual relationship with Instacart.

Thus, Plaintiff is likely to succeed on the merits of their common law claims.

B. Defendants’ Conduct Causes Irreparable Harm

It is well-settled that consumer confusion and injury to business goodwill constitute irreparable harm. *See MicroAire Surgical Instruments, LLC v. Arthrex, Inc.*, 726 F. Supp. 2d 604, 635 (W.D. Va. 2010) (“The loss of goodwill is a well-recognized basis for finding irreparable harm”); *Multi-Channel TV Cable Co. v. Charlottesville Quality Cable Operating Co.*, 22 F.3d 546 (4th Cir. 1994)), *abrogated on other grounds, Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7,

24, 129 S. Ct. 365, 376, 172 L. Ed. 2d 249 (2008). A finding of irreparable harm usually follows a finding of unlawful use of a trademark and a likelihood of confusion. *Ledo Pizza Sys., Inc. v. Singh*, No. CIV. WDQ-13-2365, 2013 WL 5604339, at *3 (D. Md. Oct. 10, 2013); *Nabisco Brands, Inc. v. Conusa Corp.*, 722 F. Supp. 1287, 1290 (M.D.N.C. 1989) (“In the context of a trademark infringement dispute, several courts have held that where likelihood of confusion is established likelihood of success on the merits as well as risk of irreparable harm follow.”).

Here, Defendants tarnish Instacart’s valuable trademarks, undoing the work Instacart has done to create a fair platform, and diminishing its reputation and goodwill among Shoppers. These injuries are sufficient in and of themselves to constitute irreparable harm. In addition, Defendants are causing monetary harm that is unlikely to ever be compensated—even after final judgment—because Defendants are elusive unknown actors whom Plaintiff is unlikely to be able to enforce judgments against. “[C]ircumstances[] such as insolvency or unsatisfiability of a money judgment, can show irreparable harm.” *Khepera-Bey v. Santander Consumer USA, Inc.*, No. CIV. WDQ-11-1269, 2013 WL 3199746, at *4 (D. Md. June 21, 2013); *accord Burns v. Dennis-Lambert Invs., Ltd. P’ship*, 2012 Bankr. LEXIS 1107, *9 (Bankr. M.D.N.C. Mar. 15, 2012) (“[A] preliminary injunction may be appropriate where ‘damages may be unobtainable from the defendant because he may become insolvent before final judgment can be entered.’”); *Rudolph v. Beacon Indep. Living LLC*, No. 3:11-CR-00617-W, 2012 WL 181439, at *2 (W.D.N.C. Jan. 23, 2012) (“Irreparable harm exists here because of Defendant Beacon’s continued occupancy of the Facility without paying any rents, particularly in light of the threat of insolvency by one or more Defendants.”).

C. The Balance of Equities Strongly Favor Injunctive Relief

Because Defendants are engaged in an illegal scheme to misuse the Instacart Platform and injure Instacart, the balance of equities clearly tips in favor granting an injunction. *See, e.g., US Airways, Inc. v. US Airline Pilots Ass’n*, 813 F. Supp. 2d 710, 736 (W.D.N.C. 2011); *Pesch v. First City Bank of Dallas*, 637 F. Supp. 1539, 1543 (N.D. Tex. 1986) (balance of hardships clearly favors injunction where enjoined activity is illegal). On one side of the scales of equity rests the

harm to Instacart and its Shoppers caused by Defendants, while on the other side, Defendants can claim no legally cognizable harm because an injunction would only require Defendants to cease illegal activities. *US Airways*, 13 F. Supp. 2d at 736.

D. The Public Interest Favors an Injunction

It is clear that an injunction would serve the public interest here. Defendants' continued operation of Shopper Helper creates hardship for Shoppers who play by the rules and use the Shopper App as intended. This leads to harm to the Instacart Platform and Instacart's reputation. Moreover, the public interest is clearly served by enforcing statutes designed to protect the public, such as the Lanham Act and CFAA. *See, e.g., BSN Med., Inc. v. Art Witkowski*, 2008 U.S. Dist. LEXIS 95338, at *10 (W.D.N.C. Nov. 21, 2008) ("In a trademark case, the public interest is 'most often a synonym for the right of the public not to be deceived or confused.' . . . the infringer's use damages the public interest.") (citation omitted); *accord Meineke Car Care Ctrs., Inc. v. Bica*, 2011 WL 4829420 (W.D.N.C. Oct. 12, 2011) (similar); *Microsoft Corp. v. Doe*, 2014 U.S. Dist. LEXIS 48398, at *32 (E.D. Va. Jan. 6, 2014) (public interest weighed in favor of injunction to enforce CFAA).

E. The All Writs Act Authorizes the Court to Direct Third Parties to Perform Acts Necessary to Avoid Frustration of the Requested Relief

Instacart's Proposed Order directs that the third-parties whose infrastructure Defendants rely on to operate Shopper Helper reasonably cooperate to effectuate the order. Critically, these third parties are the only entities within the United States that can effectively undercut the infrastructure that Shopper Helper relies on to conduct its unauthorized activities.

The All Writs Act provides that a court may issue all writs necessary or appropriate for the administration of justice. 28 U.S.C. § 1651(a). The Supreme Court has recognized that narrow direction to third parties necessary to effect the implementation of a court order is authorized by the All Writs Act: The power conferred by the Act extends, under appropriate circumstances, to persons who, though not parties to the original action or engaged in wrongdoing, are in a position to frustrate the implementation of a court order or the proper administration of justice, and

encompasses even those who have not taken any affirmative action to hinder justice. *United States v. New York Tel. Co.*, 434 U.S. 159, 174 (1977) (citations omitted) (order to telephone company to assist in implementation of a pen register warrant was authorized under the All Writs Act); *Microsoft Corp. v. Doe*, 2014 U.S. Dist. LEXIS 48398 at *30 (invoking All Writs act and granting relief similar to that requested herein); *United States v. X*, 601 F. Supp. 1039, 1042 (D. Md. 1984) (All Writs Act permits the district court to order a third party to provide “nonburdensome technical assistance” in aid of valid warrant); *Moore v. Tangipahoa Parish Sch. Bd.*, 507 Fed. App’x. 389, 396 (5th Cir. 2013) (unpublished) (“The All Writs Act provides ‘power [to] a federal court to issue such commands . . . as may be necessary or appropriate to effectuate and prevent the frustration of orders it has previously issued in its exercise of jurisdiction otherwise obtained.’”) (citing *New York Tel. Co.*, 434 U.S. at 172); see also *In re Application of United States of Am. for an Order Authorizing An In-Progress Trace of Wire Commc’ns Over Tel. Facilities*, 616 F.2d 1122, 1129 (9th Cir. 1980) (same; noting of *New York Tel. Co.*, 434 U.S. at 175, “the Court made the commonsense observation that, without the participation of the telephone company, ‘there is no conceivable way in which the surveillance authorized could have been successfully accomplished’”); *In re Baldwin-United Corp.*, 770 F.2d 328, 338-39 (2d Cir. 1985) (“An important feature of the All-Writs Act is its grant of authority to enjoin and bind non-parties to an action when needed to preserve the court’s ability to reach or enforce its decision in a case over which it has proper jurisdiction”; “[The Court does] not believe that Rule 65 was intended to impose such a limit on the court’s authority provided by the All-Writs Act to protect its ability to render a binding judgment.”); *Dell, Inc. v. Belgiumdomains, LLC*, 07-22674, 2007 WL 6862341, at *6 (S.D. Fla. Nov. 21, 2007) (All Writs Act applied in conjunction with trademark seizure under Rule 65 and Lanham Act).

Requiring these third parties to reasonably assist in the execution of this order will not offend due process as the Proposed Order: (1) requires only minimal assistance from the third parties in executing the order (acts that they would take in the ordinary course of their operations), (2) requires that it be implemented with the least degree of interference with the normal operation

of third parties, (3) does not deprive the third parties of any tangible or significant property interests, and (4) requires Instacart to compensate the third parties for the assistance rendered. If, in the implementation of the Proposed Order, any third party wishes to bring an issue to the attention of the Court, Plaintiff will bring it immediately. The third parties will have an opportunity to be heard at the preliminary injunction hearing, which must occur shortly after the execution of the Proposed Order. Fed. R. Civ. P. 65(b)(2). The directions to third parties in the Proposed Order are thus narrow, satisfy due process, and are necessary to effect the requested relief and ensure that the relief is not rendered fruitless.

Instacart Will Provide Notice To Defendants By Personal Delivery: Instacart has identified IP addresses, domains, and an e-commerce account through which Shopper Helper is operated and made available, and, pursuant to the TRO, will obtain from the infrastructure providers any and all physical addresses of the Defendants. Pursuant to Rules 4(e)(2)(A) and 4(f)(3), Instacart plans to effect formal notice of the preliminary injunction hearing and service of the complaint by personal delivery of the summons, Instacart's Complaint, the instant motion and supporting documents, and any Order issued by this Court to such addresses in the United States. Declaration of Kayvan Ghaffari In Support Of Plaintiff's Motion For TRO ("Ghaffari Decl."), ¶ 12.

Instacart Will Provide Notice By E-mail, Facsimile And Mail: Instacart has identified email addresses, mailing addresses and/or facsimile numbers provided by Defendants in connection with their infrastructure, and will further identify such contact information pursuant to the terms of the requested TRO. *Id.* ¶ 9. Instacart will provide notice of the preliminary injunction hearing and will effect service of the Complaint by immediately sending the same pleadings described above to the e-mail addresses, facsimile numbers and mailing addresses Defendants provided to the hosting companies, registrars, and e-commerce platform. *Id.* When Defendants registered for domain names, IP addresses and an e-commerce account, they agreed not to engage in abuse such as that at issue in this case and agreed that notice of disputes regarding hosting could be provided to them by sending complaints to the email, facsimile and mail addresses provide by

them. *Id.* ¶¶ 14-36.

Instacart Will Provide Notice To Defendants By Publication: Instacart will notify Defendants of the preliminary injunction hearing and the Complaint against their misconduct by publishing the materials on a centrally located, publicly accessible source on the Internet for a period of 6 months. *Id.* ¶¶ 10.

Instacart Will Provide Notice By Personal Delivery And Treaty If Possible: If valid physical addresses of Defendants can be identified, and Instacart was unable to provide notice to Defendants otherwise, Instacart will notify Defendants and serve process upon them by personal delivery or through the Hague Convention on service of process or similar treaty-based means. *Id.* ¶¶ 13.

Notice and service by the foregoing means satisfy due process; are appropriate, sufficient, and reasonable to apprise Defendants of this action; and are necessary under the circumstances. Instacart hereby formally requests that the Court approve and order the alternative means of service discussed above.

First, legal notice and service by e-mail, facsimile, and/or mail and publication satisfies due process as these means are reasonably calculated, in light of the circumstances, to apprise the interested parties of the TRO, the preliminary injunction hearing, and the lawsuit. *See Mullane v. Cent. Hanover Bank & Tr. Co.*, 339 U.S. 306, 314 (1950). Such methods are also authorized under Federal Rule of Civil Procedure 4(f)(3), which allows a party to serve defendants by means not prohibited by international agreement. The methods of notice and service proposed by Instacart have been approved in other cases involving international defendants attempting to evade authorities. *See e.g., Rio Properties, Inc. v. Rio Int'l. Interlink*, 284 F.3d 1007, 1014-15 (9th Cir. 2002) (authorizing service by e-mail upon an international defendant); *Microsoft Corp. v. John Does I-27*, Case No. 1:10-cv-156 (E.D. Va. 2010) (Brinkema J.); *Microsoft Corp.*, 2014 WL 1338677, at *3 (finding service was proper where plaintiff sent copies of the complaint, all pleadings, and the TRO notice language to all email addresses associated with botnet command and control domains and published those materials on publicly available website) (citing

Fed.R.Civ.P. 4(f)(3)); *FMAC Loan Receivables v. Dagra*, 228 F.R.D. 531, 535-36 (E.D. Va. 2005) (acknowledging that courts have readily used Rule 4(f)(3) to authorize international service through non-traditional means); *BP Products N. Am., Inc. v Dagra*, 236 F.R.D. 270, 271-73 (E.D. Va. 2006) (approving notice by publication); *AllscriptsMisys, LLC v. Am. Dig. Networks, LLC*, 2010 U.S. Dist. LEXIS 4450, at *3 (D. Md. 2010) (granting *ex parte* TRO and order prompting “notice of this Order and Temporary Restraining Order [] can be effected by telephone, electronic means, mail or delivery services.”).

Such service is particularly warranted in cases such as this involving Internet-based misconduct, carried out by defendants who may be located internationally, causing immediate, irreparable harm. As the Ninth Circuit observed:

[Defendant] had neither an office nor a door; it had only a computer terminal. If any method of communication is reasonably calculated to provide [Defendant] with notice, surely it is e-mail—the method of communication which [Defendant] utilizes and prefers. In addition, e-mail was the only court-ordered method of service aimed directly and instantly at [Defendant] ... Indeed, when faced with an international e-business scofflaw, playing hide-and-seek with the federal court, e-mail may be the only means of effecting service of process.

Rio Properties, Inc., 284 F.3d at 1018. Notably, *Rio Properties* has been followed in the Fourth Circuit. See *FMAC Loan Receivables*, 228 F.R.D. at 534 (following *Rio*); *BP Products N. Am., Inc. v. Dagra*, 232 F.R.D. 263, 264 (E.D. Va. 2005) (same); *Williams v. Adver. Sex LLC*, 231 F.R.D. 483, 486 (N.D. W. Va. 2005) (“The Fourth Circuit Court of Appeals has not addressed this issue. Therefore, in the absence of any controlling authority in this circuit, the Court adopts the reasoning of the Ninth Circuit in *Rio Properties, Inc.* . . .”).

In this case, the e-mail addresses provided by Defendants to the hosting companies, in the course of obtaining services that support the Defendants’ infrastructure, are likely to be the most accurate and viable contact information and means of notice and service. Moreover, Defendants will expect notice regarding their use of the hosting providers’ services to operate their infrastructure by those means, as Defendants agreed to such in their agreements. See *Nat’l Equip. Rental, Ltd. v. Szukhent*, 375 U.S. 311, 315-16 (1964) (“And it is settled . . . that parties to a contract may agree in advance to submit to the jurisdiction of a given court, to permit notice to be served

by the opposing party, or even to waive notice altogether.”). For these reasons, notice and service by e-mail and publication are warranted and necessary here.²

For all of the foregoing reasons, Plaintiff respectfully requests that the Court enter the requested TRO and Order to Show Cause why a preliminary injunction should not issue, and further order that the means of notice of the preliminary injunction hearing and service of the Complaint set forth herein meet Fed. R. Civ. P. 4(f)(3), satisfy due process, and are reasonably calculated to notify Defendants of this action.

IV. CONCLUSION

For all of the foregoing reasons, Plaintiff respectfully requests that the Court enter the requested TRO and Order to Show Cause why a preliminary injunction should not issue, and further order that the means of notice of the preliminary injunction hearing and service of the Complaint set forth herein meet Fed. R. Civ. P. 4(f)(3), satisfy due process, and are reasonably calculated to notify Defendants of this action.

Dated: April 16, 2021

Respectfully submitted,



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² Additionally, if the physical addressees provided by Defendants to hosting companies turn out to be false and Defendants’ whereabouts are unknown, the Hague Convention will not apply in any event and alternative means of service, such as email and publication, would be appropriate for that reason as well. *See BP Products.*, 236 F.R.D. at 271 (“The Hague Convention does not apply in cases where the address of the foreign party to be served is unknown.”).

pending)

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