

UNITED STATES DISTRICT COURT

for the

Eastern District of California

FILED
Apr 05, 2022
CLERK, U.S. DISTRICT COURT
EASTERN DISTRICT OF CALIFORNIA

In the Matter of the Search of
DEVICE AT IP ADDRESS
ASSOCIATED WITH CYCLOPS BLINK
BOTNET

Case No. 2:22-sw-0217

REDACTED

APPLICATION FOR A SEARCH WARRANT

I, a federal law enforcement officer or an attorney for the government, request a search warrant and state under penalty of perjury that I have reason to believe that on the following person or property (identify the person or describe the property to be searched and give its location):

SEE ATTACHMENT A, attached hereto and incorporated by reference.

located in the Eastern District of California, there is now concealed (identify the person or describe the property to be seized):

SEE ATTACHMENT B, attached hereto and incorporated by reference

The basis for the search under Fed. R. Crim. P. 41(c) is (check one or more):

- [x] evidence of a crime;
[] contraband, fruits of crime, or other items illegally possessed;
[x] property designed for use, intended for use, or used in committing a crime;
[] a person to be arrested or a person who is unlawfully restrained.

The search is related to a violation of:

Table with 2 columns: Code Section, Offense Description. Rows include 18 U.S.C. § 1030(a)(2), 18 U.S.C. § 1030(a)(5)(A), 18 U.S.C. § 371, Theft from a protected computer, Damage to a protected computer, Conspiracy.

The application is based on these facts:

SEE AFFIDAVIT, attached hereto and incorporated by reference.

- [x] Continued on the attached sheet.
[x] Delayed notice 30 days (give exact ending date if more than 30 days: ) is requested under 18 U.S.C. § 3103a, the basis of which is set forth on the attached sheet.

Applicant's signature

Special Agent [redacted] FBI

name and title

's signature

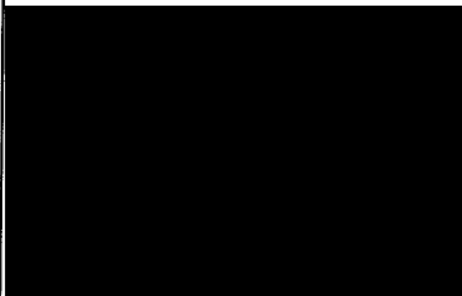
U.S. Magistrate Judge

Printed name and title

Sworn to me and signed telephonically.

Date: 3-23-22

City and state: Sacramento, California



REDACTED

Attorneys for Plaintiff  
United States of America

IN THE UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF CALIFORNIA

In the Matter of the Search of:  
DEVICE AT IP ADDRESS [REDACTED]  
ASSOCIATED WITH CYCLOPS BLINK  
BOTNET

CASE NO.

AFFIDAVIT IN SUPPORT OF AN APPLICATION  
FOR A SEARCH WARRANT

**FILED UNDER SEAL**

I, [REDACTED] being first duly sworn, hereby depose and state as follows:

**I. INTRODUCTION**

1. The United States is investigating unauthorized computer intrusions being perpetrated by a group known to private cybersecurity investigators as “Sandworm,” which is a cyber-attack and espionage group from Russia. As alleged in an indictment returned by a grand jury sitting in the U.S. District Court for the Western District of Pennsylvania on October 15, 2020 (Criminal No. 20-316) (the “October 2020 Indictment”), Sandworm is comprised of officers working for Military Unit 74455 of the Russian Federation’s Main Intelligence Directorate of the General Staff of the Armed Forces (“GRU”). Relevant to this application, the FBI is investigating the Sandworm actors’ unauthorized access to firewall appliances and Small Office/Home Office (“SOHO”) routers, most of which are manufactured by a U.S.-based company known as WatchGuard Technologies, Inc. (“WatchGuard”). Subsequent to such access, Sandworm actors infected these network devices with malicious software (or “malware”)

1 and used that malware to create and control a “botnet” – a network of other compromised network  
2 devices (individually referred to as “bots”). Although Sandworm compromised only the WatchGuard  
3 and similar devices with malware, these devices sit on the perimeter of office or home networks and can  
4 connect multiple computers to the wider Internet. Thus, each infected bot could risk exposing a larger  
5 number of computers to Sandworm’s malicious activities.

6 2. The botnet consists of two layers of compromised devices: a command and control  
7 (“C2”) layer that provides instructions to infected bots that make up a “client” layer. The devices in  
8 both layers are infected with malware, but the Sandworm actors use the C2 layer to maintain  
9 communication with and provide instructions to the bots in the client layer.

10 3. FBI agents, analysts, and computer scientists (collectively “FBI personnel”) have  
11 previously identified certain IP addresses of victim devices worldwide, including U.S.-based devices,  
12 infected with malware and being used as part of the C2 layer to send instructions to the rest of the  
13 botnet. FBI personnel recently obtained physical access to some of the devices in the C2 layer (“C2  
14 devices”) through consent of those devices’ owners and have developed the capability, detailed herein,  
15 to leverage that physical access to a few of the devices into remote access to all of the C2 devices.

16 4. FBI personnel also recently obtained, from the U.S. District Court for the Western  
17 District of Pennsylvania, authorization to electronically connect to the malware on previously-identified  
18 C2 devices and issue commands through the malware to: (1) retrieve data from the malware; (2) remove  
19 the malware from those devices; and (3) block (at least until reversed, if desired, by the device owner)  
20 remote access to the devices’ management panel. *See* In re Application for Warrants to Search Certain  
21 Servers Controlling Cyclops Blink Botnet, Magistrate Nos. 22-437 and 22-438 (W.D. Pa. Mar. 18,  
22 2022). Through these actions, as well as the search and seizure sought through this application, the FBI  
23 intends to fully neutralize the Sandworm actors’ ability to further access the devices or otherwise  
24 reconstitute the botnet through technical means described in further detail below.

25 5. The search out of the Western District of Pennsylvania was authorized pursuant to Fed.  
26 R. Crim. P. 41(b)(6)(B), which allows a judge in any jurisdiction where activities related to a crime have  
27 occurred to issue a warrant for remote, electronic access to protected computers located in five or more  
28 districts. In the course of executing the search authorized by that warrant, FBI personnel identified an

1 additional C2 device not covered by the scope of that warrant. The additional C2 device is located  
2 within the Eastern District of California.

3 6. Therefore, I make this affidavit in support of an application for a warrant under Federal  
4 Rule of Criminal Procedure 41(b)(1) to use remote access techniques to search a computer located in  
5 this judicial district, further identified in Attachment A, and to seize and copy electronically stored  
6 information that constitutes evidence and/or instrumentalities of unauthorized access and damage,  
7 further described in Attachment B.

8 7. The facts in this affidavit come from my personal observations, my training and  
9 experience, and information obtained from other witnesses and agents. This affidavit is intended to  
10 show merely that there is sufficient probable cause for the requested warrant and does not set forth all of  
11 my knowledge about this matter.

12 8. Based on my training and experience and the facts as set forth in this affidavit, there is  
13 probable cause to believe that violations of Title 18, United States Code, Sections 1030(a)(2) (theft from  
14 a protected computer), 1030(a)(5)(A) (damage to a protected computer) and 371 (conspiracy) (“Subject  
15 Offenses”) have been committed in the Western District of Pennsylvania and elsewhere. There also is  
16 probable cause to search the information described in Attachment A for evidence, contraband, fruits,  
17 and/or instrumentalities of the Subject Offenses, further described in Attachment B.

18 **II. AGENT BACKGROUND**

19 9. I am a Special Agent with the Federal Bureau of Investigation (“FBI”) assigned to FBI  
20 Pittsburgh. I have been a Special Agent with the FBI since [REDACTED] I was previously employed as a  
21 network and software engineer for approximately fifteen years, including for the FBI. As a Special  
22 Agent, I have conducted national security investigations relating to foreign intelligence and  
23 cybersecurity. I have participated in investigations of criminal offenses involving computer fraud and  
24 conspiracy, and I am familiar with the means and methods used to commit such offenses. In addition, I  
25 have received training in computer security and investigations involving computers and the Internet.  
26 For example, I have several certifications in computer forensics and advanced computer training: I am  
27 an “investigative or law enforcement officer” within the meaning of 18 U.S.C. § 2510; that is, an officer  
28 of the United States of America who is empowered to investigate and make arrests for offenses alleged

1 in this warrant.

2 **III. STATUTORY AUTHORITY**

3 10. Federal Rule of Criminal Procedure 41(b)(1) provides that “a magistrate judge with  
4 authority in the district . . . has authority to issue a warrant to search for and seize a person or property  
5 located within the district.”

6 11. Although not required to establish this court’s jurisdiction, in order to provide context for  
7 the potential crimes being investigated, I note that Title 18, United States Code, Section 1030(a)(5)(A)  
8 provides that whoever “knowingly causes the transmission of a program, information, code, or  
9 command, and as a result of such conduct, intentionally causes damage without authorization, to a  
10 protected computer . . . shall be punished as provided in subsection (c) of this section.” Section  
11 1030(e)(2)(B) defines a “protected computer” as a computer “which is used in or affecting interstate or  
12 foreign commerce or communication, including a computer located outside the United States that is used  
13 in a manner that affects interstate or foreign commerce or communication of the United States[.]”  
14 Section 1030(e)(8) defines “damage” as “any impairment to the integrity or availability of data, a  
15 program, a system, or information[.]”

16 **IV. PROBABLE CAUSE**

17 **A. “VPNFilter” Malware Used to Compromise Victim Network Devices**

18 12. In 2018, the FBI learned of numerous foreign and U.S. victims of malware associated  
19 with Sandworm in various U.S. judicial districts. These victims’ computer networks had been infected  
20 with a specific type of malware targeting SOHO routers and network access storage (“NAS”) devices,  
21 thereby forming a Sandworm botnet. Other victims included network devices in South Korea, which  
22 were infected ahead of the 2018 Winter Olympics, likely as part of the Sandworm’s later effort to  
23 disrupt the Olympics, as alleged in the October 2020 Indictment. The FBI and some private sector  
24 researchers named this botnet “VPNFilter.”

25 13. On May 22, 2018, the United States District Court for the Western District of  
26 Pennsylvania issued an order, Magistrate No. 18-665, authorizing the seizure of the toknowall.com  
27 domain, which at the time was known to be under the control of the Sandworm actors and used as one of  
28 the C2 communication channels to control the VPNFilter botnet (the “May 2018 Seizure Order”).

1 14. Pursuant to the May 2018 Seizure Order, the government seized the toknowall.com  
2 domain, redirecting all traffic to an FBI server configured to collect the source, but not the contents, of  
3 the communications. Analysis of this communications data by FBI and private sector cybersecurity  
4 researchers revealed over 500,000 infected SOHO and NAS network devices in over 50 countries.

5 15. On May 23, 2018, the U.S. Department of Justice publicly announced the operation  
6 against VPNFilter, along with information that would allow owners of infected devices to remediate  
7 their devices.<sup>1</sup> Private sector cybersecurity researchers have since assessed that the VPNFilter botnet  
8 was mostly neutralized following that operation.

9 **B. New “Cyclops Blink” Malware Used to Compromise Victim Network Devices**

10 16. On February 23, 2022, the FBI joined the United Kingdom’s National Cyber Security  
11 Centre (“NCSC”), the Department of Homeland Security’s Cybersecurity and Infrastructure Security  
12 Agency (“CISA”), and the National Security Agency (“NSA”) in releasing a joint advisory regarding  
13 new malware that the agencies named “Cyclops Blink.”<sup>2</sup> As explained in that advisory, the FBI’s  
14 analysis of Cyclops Blink identified it as Sandworm’s replacement for VPNFilter. Sandworm actors  
15 began deploying Cyclops Blink as early as June 2019, thirteen months after the Department of Justice’s  
16 disruption of the VPNFilter botnet.

17 17. As with VPNFilter, Sandworm actors have deployed Cyclops Blink on network devices  
18 worldwide in a manner that appears to be indiscriminate; *i.e.*, the Sandworm actors’ infection of any  
19 particular device appears to have been driven by that device’s vulnerability to the malware, rather than a  
20 concerted effort to target that particular device or its owner for other reasons. The Sandworm actors  
21 have done so through the exploitation of software vulnerabilities in various network devices, primarily  
22 WatchGuard firewall appliances. In particular, the WatchGuard devices are vulnerable to an exploit that  
23 allows unauthorized remote access to the management panels on those devices.

24 18. On or about February 23, 2022, in coordination with FBI, DHS, NSA, and NCSC,  
25 WatchGuard released a patch for one of the vulnerabilities that the Sandworm actors are believed to

26 \_\_\_\_\_  
27 <sup>1</sup> See <https://www.justice.gov/opa/pr/justice-department-announces-actions-disrupt-advanced-persistent-threat-28-botnet-infected>.

28 <sup>2</sup> See <https://www.ncsc.gov.uk/news/joint-advisory-shows-new-sandworm-malware-cyclops-blink-replaces-vpnfilter> (published February 23, 2022).



1 have exploited to infect the WatchGuard devices, and instructions for removing the Cyclops Blink  
2 malware. However, a fully successful remediation through such patches requires device owners to  
3 affirmatively undertake manual updates to their devices.

4 19. Despite the NCSC, FBI, CISA, NSA, and WatchGuard's February 23, 2022 public  
5 awareness campaign to inform owners of WatchGuard devices of the steps they should take to remediate  
6 infections or vulnerabilities, the FBI's investigation (*e.g.*, [REDACTED]

7 [REDACTED]  
8 [REDACTED]) has identified a drop of only approximately 39% in the number of previously identified infected  
9 bots worldwide as of March 18, 2022. Based on my training and experience, many victims likely lack  
10 the technical ability to independently remediate their devices, or do not regularly monitor industry  
11 reporting that would contain articles about the Cyclops Blink malware. These factors are likely  
12 responsible for the low patch adoption rate among compromised network devices.

13 **C. FBI's Ability to Disrupt the Botnet**

14 20. Prior to the release of the advisory, the FBI identified hundreds of victim bots in the  
15 United States. On or about September 10, 2021, FBI agents in Pittsburgh interviewed representatives of  
16 one victim company headquartered in the Western District of Pennsylvania. The company  
17 representatives advised that the company owned a WatchGuard firewall appliance identified by the FBI  
18 and confirmed that the company had not provided authorization for any third parties to access or deploy  
19 malware onto this device. The company provided consent for the FBI to make a forensic image of the  
20 device's filesystem and to prospectively observe the network traffic associated with the firewall  
21 appliance.

22 21. FBI analysis of the filesystem image of this WatchGuard firewall appliance confirmed  
23 that a malicious executable file named "CPD", the Cyclops Blink malware, was present on the device.  
24 The CPD file also contained a list of [REDACTED] embedded IP addresses, which, based on FBI's analysis of the  
25 network traffic, is a list of IP addresses for some of the other C2 devices that form a part of the Cyclops  
26 Blink botnet's C2 communication mechanism. Based on this analysis and other sources, each of the C2  
27 devices includes varying lists of between [REDACTED] and [REDACTED] other C2 devices (the "C2 IP Addresses"). All of  
28 the lists of IP addresses on the C2 devices that the FBI has analyzed to date include at least one U.S.-

1 based IP address, with many containing a roughly equal split between U.S. and foreign-based IP  
2 addresses.

3 22. Based on my training and experience, the typical botnet C2 layer is itself controlled by  
4 one or more command servers or computers, commonly referred to as a “panel.” In this case, FBI  
5 analysis of the network traffic from infected C2 devices and other sources revealed that the C2 devices  
6 appeared to be doing just that: communicating with one or more command servers or computers (here,  
7 the “Panel”).<sup>3</sup> These communications were occurring via Tor.<sup>4</sup> The Panel is controlled by Sandworm  
8 actors, [REDACTED]

9 [REDACTED] The C2 devices, in  
10 turn, communicate with and pass commands from the Panel to additional individual bots in the client  
11 layer that do not themselves communicate directly with the Panel. As of March 17, 2022, based on the  
12 FBI’s limited visibility through [REDACTED]

13 [REDACTED]  
14 [REDACTED] the FBI identified 26 IP addresses associated with C2 devices: 13  
15 in the United States, and 13 overseas.<sup>5</sup>

16 23. In January 2022, the FBI identified a U.S.-based Cyclops Blink C2 device. With the  
17 device owner’s consent, the FBI analyzed the malware and developed a means of impersonating the  
18 Sandworm actors’ Panel and sending commands to malware on the other C2 devices in the United  
19 States. The above-described search authorized by the U.S. District Court for the Western District of  
20 Pennsylvania on March 18, 2022, gave the FBI authority to remotely access and search the 13 IP  
21 addresses located in the United States, through the following commands sent to the C2 devices hosting

22  
23  
24 <sup>3</sup> [REDACTED]

24 [REDACTED] This affidavit uses the term “Panel” to refer collectively to all of the  
25 separate servers or computers being used to communicate with the C2 devices.

25 <sup>4</sup> “Tor” is an acronym for “The Onion Router,” a way of routing internet traffic through encrypted  
26 methods and relays that conceals the original source of the traffic. The FBI assesses that the Sandworm  
27 actors are utilizing Tor in this manner to conceal the ultimate source of their communications with the  
28 botnet.

27 <sup>5</sup> This affidavit describes the IP addresses as “associated with” C2 devices because it is possible  
28 that multiple devices are associated with the same IP address, and it is also possible that multiple IP  
addresses resolve to the same device.



1 those IP addresses:

- 2 i. confirm the presence of the CPD malware file on the device;
- 3 ii. remotely log the serial number of the device if infected with  
4 CPD malware;<sup>6</sup>
- 5 iii. retrieve files containing the lists of the C2 IP Addresses stored  
6 on the device;
- 7 iv. remove the CPD malware from the device; and
- 8 v. change the firewall rules on the device to block remote access  
9 to the management interface, thereby preventing the  
10 Sandworm actors from re-establishing unauthorized access to  
11 the device.<sup>7</sup>

12 24. Executing the commands described in paragraph 23 does not allow the FBI to search,  
13 view, or retrieve a victim device owner's content or data.

14 25. On March 23, 2022, while the Western District of Pennsylvania search and seizure  
15 operation was ongoing, the FBI identified another U.S-based C2 server located in the Eastern District of  
16 California (the "Target Device"), which is listed in Attachment A. The FBI identified the Target Device  
17 as a Cyclops Blink C2 server based on unique characteristics of the certificate the Sandworm actors used  
18 to facilitate communications between the Panel and the C2 devices. An open source scan of the public  
19 Internet can identify devices that publicly "advertise" to other computers on the Internet that the former  
20 devices possess this unique certificate. The FBI has confirmed the accuracy of this scanning method  
21 through subsequent searches of C2 devices as part of the Western District of Pennsylvania search and  
22 seizure operation. The FBI's March 23 scan revealed that the unique Sandworm certificate was present  
23 on the Target Device.

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24 <sup>6</sup> Inventorying the serial numbers of C2 devices infected with CPD malware will aid the FBI in  
25 engaging with victims, because in some instances, victims have more than one WatchGuard device on the  
26 same IP address. Because a serial number is unique to each device, however, the serial numbers can be  
used to determine precisely which devices had been compromised by the malware and which will have  
been, therefore, impacted by this operation.

27 <sup>7</sup> In notifying the victim of the execution of this search and seizure, FBI will explain this change,  
28 and if any of the device owners wish to change their devices back to permit remote access to the  
management panel, they will be able to do so. As described below, changing the configuration of the  
devices to prevent remote access will not interfere with their underlying ability to route traffic to and from  
the network or otherwise to perform as a firewall.

1 **D. Remote Access, Searches, and Seizures**

2 26. As described above, FBI personnel have identified an IP address associated with the  
3 Target C2 Device in this district and have developed the capability of impersonating Sandworm actors  
4 to communicate with that device. FBI personnel seek authorization to search the Target C2 Device and,  
5 through interactions with the CPD malware, to copy the malware (including the malware file's list of C2  
6 IP Addresses), remove the CPD malware, and change firewall rules to block remote access to the  
7 device's management panel. By removing the malware file and changing the firewall rules, the FBI will  
8 prevent, or at least make it difficult for, the Sandworm actors to have further interaction with the C2  
9 device through the Cyclops Blink botnet.<sup>8</sup> In turn, without access to the device—combined with the  
10 FBI's previous execution of the search authorized by the Western District of Pennsylvania—the  
11 Sandworm actors will be unable to communicate with the bots in the client layer.

12 27. The FBI has worked with WatchGuard and other federal government partners to test,  
13 using WatchGuard appliances obtained by the FBI, its technical ability to remove the CPD file by using  
14 commands sent to the malware. When conducted through the testing process, this command  
15 successfully copied and deleted the CPD file from an FBI-controlled WatchGuard device and did not  
16 impact other files or functionality on the device. Further, to ensure that the operation is conducted as  
17 intended, the FBI commands will cause the CPD malware on the Target C2 Device to relay a  
18 confirmation that it has received the commands back to the FBI-controlled server. This will ensure that  
19 the search described herein is being carried out, and that the commands operate, as intended. The FBI-  
20 controlled server will not maintain a communications channel with the Target C2 Device after this  
21 procedure is concluded. Additionally, the technical procedure described herein has already been  
22 executed against a number of C2 devices in other judicial districts pursuant to the search authorized by  
23 the Western District of Pennsylvania, without unintended adverse consequences.

24 28. Similarly, the FBI has confirmed with Watchguard and through its own testing that the  
25

26 \_\_\_\_\_  
27 <sup>8</sup> As described earlier, the Sandworm actors never regained control of the VPNFilter botnet after  
28 its 2018 disruption. However, in light of the current geopolitical climate surrounding Russia's invasion  
of Ukraine, the FBI believes it is reasonable to conclude that the Sandworm actors' risk calculus has  
changed and that these additional steps are necessary in order to better protect the networks of the C2  
device owner and the networks of the underlying bots from again falling under Sandworm's control.

1 contemplated change to the firewall rules to prevent remote access to the management panel will not  
2 otherwise affect the functionality of the infected C2 devices. Additionally, this change to the firewall  
3 rules will be “non-persistent,” meaning that any C2 device owner can delete or change the rules, or can  
4 restart the device to restore the previous configuration permitting remote management access.  
5 Watchguard customer support is aware, and the FBI intends to explain publicly in connection with the  
6 announcement of the execution of this search warrant, that a customer can change these rules to their  
7 preferred configuration.

8 **V. TIME AND MANNER OF EXECUTION**

9 29. I request that the Court authorize the government to access the relevant victim computers  
10 located in the United States for a period of fourteen days, beginning on or about March 23, 2022.

11 30. Because accessing such computers at all times will allow the government to minimize the  
12 likelihood of the actors’ detection and deployment of countermeasures that could frustrate the authorized  
13 search, good cause exists to permit the execution of the requested warrant at any time in the day or  
14 night.

15 **VI. REQUEST FOR SEALING AND DELAYED NOTICE**

16 31. Based on my training and experience and my investigation of this matter, I believe that  
17 reasonable cause exists to seal this application and warrant, as well as the return to the warrant, and to  
18 delay the service of the warrant as normally required for up to thirty days after execution of the warrant.  
19 Pursuant to 18 U.S.C. § 3103a(b) and Federal Rule of Criminal Procedure 41(f)(3), delayed notice of the  
20 execution of a search warrant is permitted if three requirements are satisfied: (1) the Court finds  
21 reasonable cause to believe that providing immediate notification may have an adverse result, as defined  
22 in 18 U.S.C. § 2705; (2) the warrant does not allow the seizure of tangible property, wire or electronic  
23 communication, or stored wire or electronic information (unless the Court finds reasonable necessity for  
24 the seizure); and (3) the warrant provides for the giving of such notice within a reasonable period after  
25 execution, not to exceed 30 days unless the facts of the case justify a longer period. 18 U.S.C. §  
26 3103a(b)(1)-(3). An “adverse result” includes endangering the life or physical safety of an individual,  
27 flight from prosecution, destruction of or tampering with evidence, witness intimidation, or “otherwise  
28 seriously jeopardizing an investigation.” 18 U.S.C. § 2705(a)(2)(A)-(E).

1 32. The requirements of Rule 41(f)(3) and § 3103a(b) are met in this case, specifically with  
2 regard to destruction or tampering of evidence and otherwise seriously jeopardizing the investigation,  
3 until the FBI has completed its operation. 18 U.S.C. § 2705(a)(2)(C), (E). Thus, reasonable cause exists  
4 to seal this application and warrant, as well as the return to the warrant, and to delay the service of the  
5 warrant as normally required until up to thirty days after execution of the warrant.

6 33. Based upon the information provided in this Affidavit, my training and experience, and  
7 discussions with other Special Agents of the FBI, allowing premature disclosure to the public at large or  
8 to individual infected device owners would likely seriously jeopardize the ongoing investigation and  
9 effort to ensure a comprehensive remediation of the botnet. Such a disclosure, for example, may give  
10 the subjects of this investigation an opportunity to destroy or tamper with evidence or change patterns of  
11 behavior. Disclosure also could prompt the subjects to make changes to the malware or C2 devices  
12 before FBI personnel can act pursuant to the requested warrant, which would enable persistent access,  
13 further exploitation of the victims, and defeat the efforts of FBI personnel to identify further victims and  
14 disrupt the botnet.

15 34. As this warrant seeks delayed notice pursuant to Title 18, United States Code, Section  
16 3103a, it does not seek authorization to seize any tangible property. In addition to delaying notice,  
17 pursuant to Title 18, United States Code, Section 3103a(b)(2), reasonable necessity exists to seize stored  
18 electronic information (i.e., malware, lists of other C2 devices, and basic victim information) found on  
19 the C2 device identified in Attachment A.

20 35. Accordingly, the United States requests approval from the Court to delay notification  
21 until April 22, 2022, 30 days from the first possible date of execution on March 23, 2022, or until the  
22 FBI determines that there is no longer need for delayed notice, whichever is sooner. See 18 U.S.C. §  
23 3013a(b)(3) (limiting initial delayed notice to a “reasonable period not to exceed 30 days after the date  
24 of its execution,” absent a later date certain).

25 36. While the United States seeks authorization to delay notice, during the period of delayed  
26 notice the United States may still seek to notify the victim or to disclose information obtained as a result  
27 of the requested warrant to the victim or to private entities or foreign authorities for purposes of  
28 mitigating the effects of any computer intrusion or assisting in maintaining the security of computers or

1 networks during the authorized period of delayed notice.

2 37. When notice is no longer delayed, the United States intends, pursuant to Rule 41(f)(1)(C),  
3 to provide notice both directly and through publication. Federal Rule of Criminal Procedure 41(f)(1)(C)  
4 provides the following regarding the means of providing notice of the warrant and receipt:

5 For a warrant to use remote access to search electronic storage media and  
6 seize or copy electronically stored information, the officer must make  
7 reasonable efforts to serve a copy of the warrant and receipt on the person  
8 whose property was searched or who possessed the information that was  
9 seized or copied. Service may be accomplished by any means, including  
10 electronic means, reasonably calculated to reach that person.

11 38. If the victim's publicly available Whois records contain contact information, FBI  
12 personnel will notify the victim of the search. If the victim uses a domain registration privacy service or  
13 if its contact information is not otherwise publicly available, the FBI will contact the privacy service or  
14 to the provider hosting the victim's domain asking them to provide notice to the client. If none of the  
15 above options are available, the FBI will provide notice to the Internet Service Provider (ISP) that hosts  
16 the IP address for the victim asking it to provide notice to the client. For all such notifications, the FBI  
17 will provide a copy of the requested warrant and receipt. Finally, the FBI will issue a public notice on  
18 its official website (www.fbi.gov) that the FBI conducted the operation to further alert the victim. The  
19 Department will issue a similar notice on its official website (www.justice.gov). I believe that this  
20 combination of methods is reasonably calculated to reach those persons entitled to service of a copy of  
21 the warrant and receipts.

22 */// \**  
23 */// Whois is a term to describe publicly*  
24 */// available databases that identify IP*  
25 */// addresses to internet service providers.*

26 */// - inserted telephonically*





**VII. CONCLUSION**

39. I submit that this affidavit supports probable cause for warrants to use remote access to search electronic storage media described in Attachment A and to seize or copy electronically stored information described in Attachment B.

40. The above information is true and correct to the best of my knowledge, information, and belief.

Respectfully submitted,

\_\_\_\_\_  
Special Agent  
Federal Bureau of Investigation

Subscribed and sworn before me telephonically:

\_\_\_\_\_  
The  
UNITED STATES MAGISTRATE JUDGE

\_\_\_\_\_  
Approved as to form by AUSA \_\_\_\_\_

**ATTACHMENT A**

**Property to Be Searched**

This warrant applies to victim network devices located in the Eastern District of California onto which malicious cyber actors have installed, without authorization, a malicious executable file named “CPD”, the Cyclops Blink malware, associated with the internet protocol (“IP”) address listed below (the “Target C2 Device”):

A rectangular box containing a redacted IP address. The left portion of the box is filled with black, while the right portion is white with a black border.

**ATTACHMENT B**

**Particular Things to be Seized**

This warrant authorizes the use of remote access techniques to search the Target C2 Device identified in Attachment A and to seize and copy from it the list of C2 IP Addresses and a malicious executable file named “CPD”, used by malicious actors to control, without authorization, other compromised network devices, as evidence and/or instrumentalities of the computer fraud and conspiracy in violation of Title 18, United States Code, Sections 1030(a)(2) (theft from a protected computer), 1030(a)(5)(A) (damage to a protected computer) and 371 (conspiracy). This authorization includes the use of remote access techniques to access the Target C2 Device and issue commands to (1) copy and delete the malicious executable file named “CPD”; and (2) modify the Target C2 Device’s firewall rules to block remote access to the management panel. This warrant does not authorize the seizure of any tangible property. Except as provided above, this warrant does not authorize the seizure or copying of any content from the Target C2 Device or the alteration of the functionality of those network devices.

AO 93 (Rev. 11/13) Search and Seizure Warrant

UNITED STATES DISTRICT COURT

for the

Eastern District of California

REDACTED

In the Matter of the Search of

DEVICE AT IP ADDRESS [REDACTED] ASSOCIATED WITH CYCLOPS BLINK BOTNET

Case No. 2:22-sw-0217 [REDACTED]

SEARCH AND SEIZURE WARRANT

To: Any authorized law enforcement officer

An application by a federal law enforcement officer or an attorney for the government requests the search of the following person or property located in the Eastern District of California

(identify the person or describe the property to be searched and give its location):

SEE ATTACHMENT A, attached hereto and incorporated by reference.

I find that the affidavit(s), or any recorded testimony, establish probable cause to search and seize the person or property described above, and that such search will reveal (identify the person or describe the property to be seized):

SEE ATTACHMENT B, attached hereto and incorporated by reference.

YOU ARE COMMANDED to execute this warrant on or before April 6, 2022 (not to exceed 14 days)

[ ] in the daytime 6:00 a.m. to 10:00 p.m. [x] at any time in the day or night because good cause has been established.

Unless delayed notice is authorized below, you must give a copy of the warrant and a receipt for the property taken to the person from whom, or from whose premises, the property was taken, or leave the copy and receipt at the place where the property was taken.

The officer executing this warrant, or an officer present during the execution of the warrant, must prepare an inventory as required by law and promptly return this warrant and inventory to: any authorized U.S. Magistrate Judge in the Eastern District of California.

[x] Pursuant to 18 U.S.C. § 3103a(b), I find that immediate notification may have an adverse result listed in 18 U.S.C. § 2705 (except for delay of trial), and authorize the officer executing this warrant to delay notice to the person who, or whose property, will be searched or seized (check the appropriate box)

[x] for 30 days (not to exceed 30) [ ] until, the facts justifying, the later specific date of

Date and time issued: 3-23-22 @ 5:27pm P.T.

[REDACTED SIGNATURE] U.S. Magistrate Judge

City and state: Sacramento, California

Printed name and title

**ATTACHMENT A**

**Property to Be Searched**

This warrant applies to victim network devices located in the Eastern District of California onto which malicious cyber actors have installed, without authorization, a malicious executable file named “CPD”, the Cyclops Blink malware, associated with the internet protocol (“IP”) address listed below (the “Target C2 Device”):





**ATTACHMENT B**

**Particular Things to be Seized**

This warrant authorizes the use of remote access techniques to search the Target C2 Device identified in Attachment A and to seize and copy from it the list of C2 IP Addresses and a malicious executable file named “CPD”, used by malicious actors to control, without authorization, other compromised network devices, as evidence and/or instrumentalities of the computer fraud and conspiracy in violation of Title 18, United States Code, Sections 1030(a)(2) (theft from a protected computer), 1030(a)(5)(A) (damage to a protected computer) and 371 (conspiracy). This authorization includes the use of remote access techniques to access the Target C2 Device and issue commands to (1) copy and delete the malicious executable file named “CPD”; and (2) modify the Target C2 Device’s firewall rules to block remote access to the management panel. This warrant does not authorize the seizure of any tangible property. Except as provided above, this warrant does not authorize the seizure or copying of any content from the Target C2 Device or the alteration of the functionality of those network devices.