

Peering into Midnight Blizzard's DNS Footprint

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Executive Report

Thousands of people working for organizations in the public, academia, and defense sectors are being targeted by spear-phishing attacks operated by a threat group called "Midnight Blizzard." The messages contained a Remote Desktop Protocol (RDP) configuration file connected to the malicious actor's server.

Midnight Blizzard has been active for decades now, but using a signed RDP config file to gain access to a victim's device is a new vector, according to Microsoft, which also published a list of indicators of compromise (IoCs) comprising 276 subdomains and five domains. From this list, the WhoisXML API research team analyzed and expanded a total of 39 domain IoCs (including 34 domains extracted from the subdomains tagged as IoCs), leading to the discovery of:

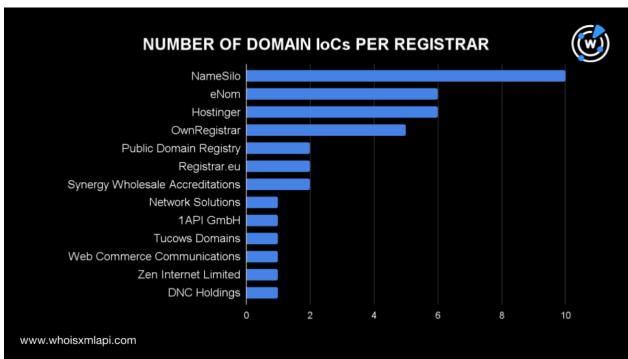
- 18 email-connected domains
- 16 IP addresses, 11 of which turned out to be malicious
- 20 IP-connected domains, one of which turned out to be malicious
- 106 string-connected domains, six of which turned out to be malicious

What We Know about the Midnight Blizzard IoCs

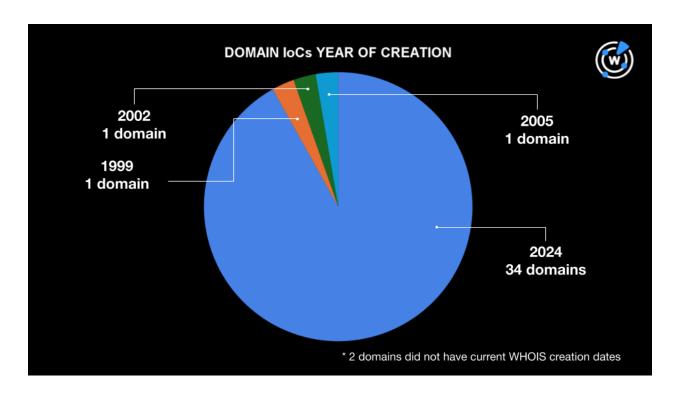
To learn more about the attributes of the 39 domain IoCs, we ran them on <u>Bulk WHOIS Lookup</u>, which revealed that:

13 registrars administered the domains with NameSilo taking the lead (10 domains). It
was followed by eNom and Hostinger with six domains each; OwnRegistrar with five
domains; Public Domain Registry, Registrar.eu, and Synergy Wholesale Accreditations
with two domains each; Network Solutions, 1API GmbH, Tucows Domains, Web
Commerce Communications, Zen Internet Limited, and DNC Holdings with one domain
each.



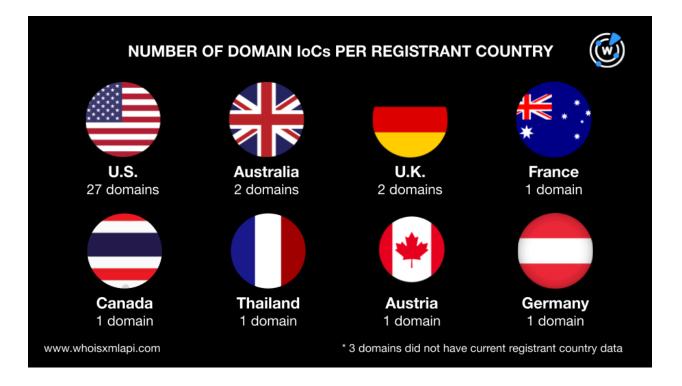


• A total of 34 out of the 39 domain IoCs were registered no earlier than August 2024, while one each was created in 1999, 2002, and 2005, respectively. Two domains did not have current WHOIS creation dates.





A total of 69% of the domains were registered in the U.S., while the rest were registered
in seven other countries, namely, Australia, the U.K., France, Canada, Thailand, Austria,
and Germany. Three domains did not have current registrant country data.



Next, we queried the 39 domains tagged as IoCs on <u>DNS Chronicle API</u> to see their earliest IP resolution dates and mobilization timeline.

Excluding the two domains that did not have current creation dates, we found that about 57%, 21 to be exact, immediately resolved to different IP addresses within three days upon registration, 1 resolved 10–30 days from the day it was registered, and 9 domains resolved 30 days or beyond after their registration dates. Meanwhile, 6 domains did not have recorded historical IP resolutions. Below are some examples.

DOMAIN IoC	DOMAIN REGISTRATION DATE	RESOLUTION START DATE	REGISTRATION-TO- RESOLUTION TIMELINE (DAYS)
difesa-it[.]cloud	22 August 2024	22 August 2024	0
mfa-gov[.]cloud	15 August 2024	31 August 2024	16
gov-ua[.]cloud	15 August 2024	29 September 2024	45



In total, the 39 domains tagged as IoCs resolved to 47 unique IP addresses from the time they were registered until their most recent resolution dates.

We also queried the 39 domains tagged as IoCs on <u>Screenshot API</u> and found that five remained accessible, while eight returned a 403 Forbidden error.

Midnight Blizzard IoC Expansion Analysis Findings

Among the goals of our threat reports is to discover additional threat artifacts. As our usual first step, we queried the 39 domains tagged as IoCs on WHOIS History API, which returned 11 email addresses from their historical WHOIS records. Only five of these email addresses were public.

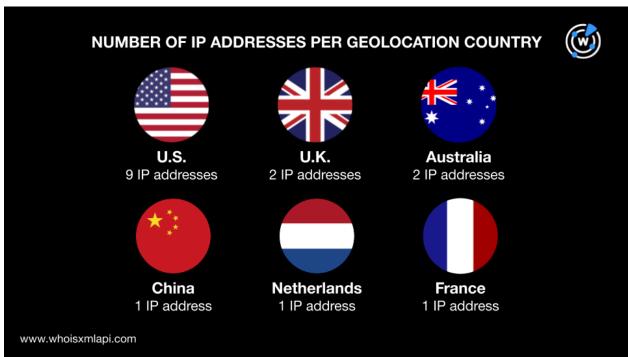
Querying the five public email addresses on <u>Reverse WHOIS API</u> gave us 18 email-connected domains after duplicates and the IoCs were filtered out.

We then ran the 39 domain IoCs on <u>DNS Lookup API</u> and found that 16 of them resolved to 16 unique IP addresses, 11 of which were malicious according to <u>Threat Intelligence API</u>. All 11 malicious IP addresses were associated with malware distribution.

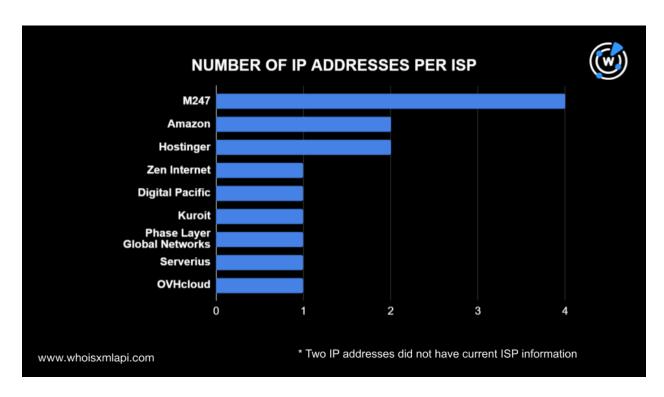
Next, a bulk IP geolocation lookup for the 16 IP addresses revealed that:

• They were spread across six geolocation countries led by the U.S. with nine IP addresses. The U.K. and Australia accounted for two IP addresses each, while China, the Netherlands, and France accounted for one IP address each.





 While two IP addresses did not have current ISP information, the rest were distributed across nine different ISPs led by M247 (four IP addresses). It was followed by Amazon and Hostinger (two IP addresses each) and Zen Internet, Digital Pacific, Kuroit, Phase Layer Global Networks, Serverius, and OVHcloud (one IP address each).





We then sought to find IP-connected domains by querying the 16 IP addresses on Reverse IP API. We found that 11 of them could be dedicated, as they hosted only 3–39 domains each. Overall, we found an additional 20 unique IP-connected domains after removing duplicates, the IoCs, and the email-connected domains.

<u>Threat Intelligence API</u> also revealed that one IP-connected domain, eu-west-3-aws[.]minbuza[.]cloud, was malicious and associated with malware distribution.

Our next analysis leveraged <u>Domains & Subdomains Discovery</u> to uncover domains that contained the text strings that appeared in the domain IoCs. We found 106 string-connected domains that started with these strings added from 1 January to 9 December 2024:

- gov-ua.
- gov-pl.
- ncfta.
- amazonsolutions.
- ua-gov.
- mfa-gov.
- quirinale.
- sellar.
- ukrtelecom.
- gv-at.
- townoflakelure.
- ua-mil.
- ua-sec.
- minbuza.
- gov-sk.
- s3-be.
- regeringskansliet-se.
- msz-pl.

- difesa-it.
- mil-be
- ua-energy.
- mzv-cz.
- s3-ua.
- ukrainesec.
- aws-ukraine.
- dep-no.
- presidencia-pt.
- gov-trust.
- mil-pl.
- mindef-nl.
- mzv-sk.
- s3-esa.
- s3-nato.
- s3-de.
- admin-ch.
- mil-pt.

Six of the string-connected domains were malicious.

Finally, we ran the 144 domain artifacts (i.e., domains connected to the IoCs via email address, IP address, and text string) on <u>Screenshot API</u>. We found that 41 of them remained accessible to date.

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Our DNS deep dive into the Midnight Blizzard IoCs led to the discovery of 160 additional artifacts comprising 18 email-connected domains, 16 IP addresses, 20 IP-connected domains, and 106 string-connected domains. Eighteen of these artifacts have already been weaponized, mainly for malware distribution.

If you wish to learn more about the products used in this research, please don't hesitate to contact us.

Disclaimer: We take a cautionary stance toward threat detection and aim to provide relevant information to help protect against potential dangers. Consequently, it is possible that some entities identified as "threats" or "malicious" may eventually be deemed harmless upon further investigation or changes in context. We strongly recommend conducting supplementary investigations to corroborate the information provided herein.

Appendix: Sample Artifacts

Sample Email-Connected Domains

- whyhickorynutgorge[.]com
- whychimneyrockvillage[.]com
- nchighway9[.]com
- workinthegorge[.]com

- lakelurejobs[.]com
- whylakelure[.]com
- whylakelure[.]org
- whylakelure[.]net
- ernestpublications[.]com

Sample IP Addresses

- 82[.]71[.]204[.]23
- 162[.]221[.]183[.]17
- 101[.]0[.]108[.]6
- 103[.]19[.]61[.]169

- 54[.]148[.]47[.]112
- 45[.]80[.]193[.]9
- 185[.]76[.]79[.]178
- 81[.]17[.]31[.]106

Sample IP-Connected Domains

- brandstorm[.]pw
- camaramulsaodomingosdoaraguaia[.]pa[.]gov[.]br
- jimmie24[.]oceansaver[.]in
- cpanel[.]minbuza[.]cloud
- cmbaiao[.]pa[.]gov[.]br

- eu-west-3-aws[.]minbuza[.]cloud
- cmbrejograndedoaraguaia[.]pa[.]gov[.]br
- ftp[.]minbuza[.]cloud
- kitpublico[.]com[.]br
- localhost[.]minbuza[.]cloud

Sample String-Connected Domains



- sellar[.]tech
- sellar[.]top
- sellar[.]so
- townoflakelure[.]ws
- townoflakelure[.]ph
- zsu-ua-gov[.]info
- ua-gov[.]ph
- ncua-gov[.]net
- ncua-gov[.]info
- ua-gov[.]org
- edopomoga-ua-gov[.]org
- ua-gov[.]space
- edopomoga6-gov-ua[.]com
- petition-gov-ua[.]org
- bkr-omv-gov-ua[.]xyz
- vb-bkr-omv-gov-ua[.]help
- petition-president-gov-ua[.]online
- hsc-gov-ua[.]online
- unicuef-gov-ua[.]buzz
- edopomoga8-gov-ua[.]com
- bkr-omv-gov-ua[.]buzz
- petition-president-gov-ua[.]com
- hsc-gov-ua[.]org[.]ua
- vb-bkr-omv-gov-ua[.]buzz
- police-gov-ua[.]ru
- dopomoga-gov-ua[.]com
- edopomoga7-gov-ua[.]net
- vb-bkr-omv-gov-ua[.]xyz
- rama-vb-bkr-omv-gov-ua[.]biz
- vb-bkr-omv-gov-ua[.]bond
- police-gov-ua[.]com
- edopomoga1-gov-ua[.]com
- edopomoga-gov-ua[.]org
- edopomoga7-gov-ua[.]com
- rama-vb-bkr-omv-gov-ua[.]bond
- mod-gov-ua[.]com
- pttgov-ua[.]top
- dpsu-gov-ua[.]com
- vb-bkr-omv-gov-ua[.]biz
- petition-gov-ua[.]com

- edopomoga-gov-ua[.]net
- rama-vb-bkr-omv-gov-ua[.]buzz
- login-gov-ua[.]com
- ukraongov-ua[.]com
- dopomoga-gov-ua[.]net
- edopomoga-gov-ua[.]com
- rama-vb-bkr-omv-gov-ua[.]shop
- opendata-hsc-gov-ua[.]site
- dopomogagov-ua[.]com
- bkr-omv-gov-ua[.]biz