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FortiNAC - Domains to Add to FortiNAC Allowed Domains List

Version 7.2. F

A decorative pattern of overlapping, multi-lined hexagons in a light blue color, set against a dark blue background, located at the bottom of the page.

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Overview

This document provides a list of domains that may need to be added to ensure appropriate IP resolution from restricted VLANs (“isolation” VLANs).

Note: Domains for the Allowed Domains List are added to new images of FortiNAC. Depending upon the image’s Engine Version when the appliance was built, any/all of the domains may already be listed.

What it Does

Provides appropriate IP resolution to restricted devices for completing actions such as updating AV/AS programs and SSL certificate authentication, this list should be updated as necessary.

How it Works

When a device is connected to an “isolation” VLAN (e.g., Isolation, Registration, Quarantine, DeadEnd), the FortiNAC Server/Application Server acts as the DNS server. Upon receipt of a DNS request from the isolated host, FortiNAC returns the IP address of the eth1 interface unless the domain is listed in the Allowed Domains page. If a request for a domain listed in the Allowed Domains page is received, FortiNAC sends a request to the customer’s DNS server for resolution.

1. Device connects to isolation VLAN and FortiNAC provides DHCP addressing, including FortiNAC eth1 IP address for the DNS Server.
2. Device sends DNS query for domainA.com to eth1 IP address.
3. DomainA.com is in the allowed domains list. Therefore, FortiNAC proxies the query to the production DNS server.
4. Production DNS answers FortiNAC with IP Address 1.2.3.4.
5. FortiNAC answers device with IP address 1.2.3.4.

For instructions on adding domains, see section **Allowed domains** of the appropriate Administration Guide:

[Version 8.x Administration Guide](#)

[Version 9.x Administration Guide](#)

Requirements

- Router/firewall policies to handle traffic for devices in the “isolation” VLAN. FortiNAC does not act as a router.
- Do not include a “.” to the start of a domain. This will cause named-chroot service to fail. In a High Availability environment, this can trigger a failover event to occur.
Incorrect: .data.microsoft.com
Correct: data.microsoft.com
- Do not add domains matching that of the FortiNAC FQDN. This may cause a-symmetric routing to occur and prevent the agent from establishing a TCP connection.
Example:
FQDN: myFortiNAC.mydomain.com
Do not add mydomain.com to Allowed Domains List
- FortiNAC appliances deployed on Azure: Additional domains are required for isolated clients to properly resolve. See [Azure Deployments](#) for additional domains.

Domains List

General

aaplimg.com (Allows the Bradford Mobile Agent to be downloaded)

accounts.google.com (Google Authentication, Airwatch MDM)

accounts.youtube.com (Google Authentication, Airwatch MDM)

affirmtrust.com (Certificate Authority)

akadns.com (Microsoft Security Essentials)

akadns.net (Microsoft Security Essentials)

akadns.org (Microsoft Security Essentials)

akam.net (AVG)

akam.net (Microsoft Security Essentials)

akamai.com (Microsoft Security Essentials)

akamai.net (Microsoft Security Essentials)

akamaiedge.net (Antivirus Zone)

akamaiedge.net (Microsoft Security Essentials)

akamaitech.net (Microsoft Security Essentials)

akamaitechnologies.com (Microsoft Security Essentials)

amazonaws.com (Sophos downloads for Apple, Google Play Store)

amazoncr1.com (Kaspersky 2016 Internet Security Browser Redirection)

android.clients.google.com (Google Play Store to download Bradford Mobile Agent)

android.l.google.com (Google Play Store to download Bradford Mobile Agent)

antivirus.com (Trend Micro)

antivirus.net.my (GDATA-AntiVirusKit)

apis.google.com (Google Authentication, Airwatch MDM)

apple.com (Apple)

apple-dns.net (iOS initial configuration)

appleiphonecell.com (iOS 7 requires to build the Registration page)

appperformable.com (to download Vipre definitions (Vipre sold to Threat Track))

aspnetscdn.com (Microsoft Security Essentials)

assets.onestore.ms (Helps resolve the Microsoft web site)
atdmt.com (Antivirus Zone)
a-msedge.net (Microsoft Critical Updates)
au-msedge.net (Microsoft Critical Updates)
avast.com (Avast)
avcdn.net (AVG Free 2017 and AVAST)
avg.com (AVG)
avg.cz (AVG)
avgbrowser.com (AVG)
avgfree.com (AVG)
avgfree.com (AVG)
avgtechnologies.112.2o7.net (AVG)
avira.com (Avira)
avira-update.com (Avira)
awada.com (Airwatch MDM)
azureedge.net (Azure content delivery network: Used in Microsoft downloads)
bing.com (Microsoft Updates)
bitdefender.net (BitDefender updates from cloud)
bitdefender.com (Softwin-BitDefender)
broadcom.com (Symantec)
bullguard.com (BullGuard)
button.aspnetcdn.com (Microsoft Security Essentials javascript for Download)
b-msedge.net (MS Office 365 products)
ca.com (EZ-Trust and eTrust)
cachefly.net (Certificate Authority)
cbsi.com (To download AVG or Avast)
cbsistatic.com (Certificate Authority)
cdn-apple.com (iOS initial configuration)
cedexis.net (Microsoft Critical Updates)
checkout.google.com (Airwatch MDM)
chicdn.net (access upgrade.bitdefender.com)
clamav.net (ClamAV)
clamwin.com (Clamwin)
clamxav.com (ClamXAV)

clamxav.net (ClamXAV)
cloudapp.net (Norton Updates)
cloudflare.net (Certificate Authority)
cloudfront.net (Samsung S4 requires to connect to wireless)
c-msedge.net (Microsoft Critical Updates)
cnet.com (Spyware Update Zones)
com.com (AVG)
comodoca.com (Certificate Authority)
comodoca4.com (Certificate Authority)
cotcdn.net (Graphics of Avast)
d4p.net (Microsoft Security Essentials)
digicert.com (Certificate Authority)
digicertcdn.com (Certificate Authority)
digitalriver.com (Spyware Update Zones)
digitalrivercontent.net (Microsoft home page)
digsigtrust.com (Certificate Authority)
download.com (Spyware Update Zones)
drweb.com (DrWeb)
drweb-online.com (DrWeb)
dw.com (Spyware Update Zones)
edgecastcdn.net (Microsoft Security Essentials)
edgekey.net (Apple)
edgesuite.net (Microsoft Security Essentials)
edgesuite-staging.net (Microsoft Security Essentials)
element5.com (AVG)
enlighten.com (Microsoft home page)
entrust.net (Certificate Authority)
exchangelabs.com (Microsoft)
eset.com (Eset-NOD32)
fastly.net (Content delivery, downloads)
fdlstatic.com (To download AVG or Avast)
footprint.net (Microsoft Security Essentials)
f-prot.com (F-Prot)
free-av.com (Avast)

free-av.de (Avast)
f-secure.com (F-Secure)
g.msn.com (AVG)
gdata.de (AVG)
geotrust.com (Certificate Authority)
geotrust.net (Certificate Authority)
ggpht.com (Google Play Store to download Bradford Mobile Agent)
glancecdn.net (Amazon content delivery, Norton downloads)
globalsign.com (Certificate Authority)
globalsign.net (Certificate Authority)
globalsigncdn.com (Certificate Authority)
godaddy.com (Certificate Authority)
googleapis.com (Certificate Authority)
googlehosted.com (Google Authentication, Sophos download)
googlehosted.googleusercontent.com (Google Authentication, Airwatch MDM)
googletagmanager.com (Google Authentication, Sophos download)
grisoft.com (AVG)
grisoft.cz (AVG)
gtld-servers.net (Microsoft Security Essentials)
gvt1.com (Google download such as the Android Mobile Agent and other programs)
howtotell.com (Microsoft Validation Site)
html.it (AVG)
hwcdn.net (download Vipre definitions and Malwarebytes)
files.downloadnow.com (Avast download for Mac OSX)
icloud.com (iPads require communication to icloud.com (Without it registrations take 10+ minutes))
identrust.com (Certificate Authority)
incommon.org (Certificate Authority)
incommon-rsa.org (Certificate Authority)
inecnet.cz (AVG)
insnw.net (avast download from cnet.com)
integodownload.com (Required by Intego for definition updates)
invision.com (AVG)
itunes.com (iOS App Store)
jquery.com (Microsoft Security Essentials)

kaspersky.com (Kaspersky)
kasperskylabs.net(Kaspersky)
keynectis.com (Certificate Authority)
kolla.de (Spyware Update Zones)
kundenserver.de (Spyware Update Zones)
l.google.com (Certificate Authority)
lavasoft.com (Spyware Update Zones)
lavasoft.de (Spyware Update Zones)
lavasoftusa.com (Spyware Update Zones)
lh4.googleusercontent.com (Google Authentication, Airwatch MDM)
liveupdate.com (Antivirus Zone)
liveupdate.symantec.r3h.net (Antivirus Zone)
llnwd.net (Vista)
llnwi.net (Microsoft Security Essentials)
macomnet.ru(Kaspersky AV Moscow)
mail.google.com (Google Authentication, Airwatch MDM)
mcafee.com (Antivirus Zone)
mcafeesecurity.com (Antivirus Zone)
mem.gx.ms (Microsoft Web Page Styles)
microsoft.com (Update Zones)
microsoft.net (Update Zones)
microsoftonline.com (Required for MS cloud based email)
microsoftonline-p.com (Azure
microsoftstore.com (Microsoft home page)
microworld.com (MicroWorld-eScan)
msecnd.net (AVG)
msedge.net (Windows Update, MS Office 365 products)
msft.com (Microsoft Security Essentials)
msft.net (Microsoft Security Essentials)
msftauthimages.net (Microsoft Office 365)
msftconnecttest.com (Windows updates)
msftncsi.com (AVG)
msauthimages.net (Microsoft)
msidentity.com (MS Office 365 products)

msocdn.com (MS Office 365 products)
msocsp.com (Kaspersky 2016 Internet Security Browser Redirection)
mwti.net (MicroWorld-eScan)
mynortonaccount.com (Antivirus Zone)
mzstatic.com (iOS App Store)
nai.com (Antivirus Zone)
netsolssl.com (Certificate Authority)
netupdate2.intego.com (Trend Micro)
networkassociates.com (Antivirus Zone)
now.symassets.com (Antivirus Zone)
norman.com (Norman)
norton.com (Antivirus Zone)
nortoncdn.com (Norton downloads)
nsatc.com (Microsoft Security Essentials)
nsatc.net (Microsoft Security Essentials)
nsatc.org (Microsoft Security Essentials)
oauth.googleusercontent.com (Google Authentication, Airwatch MDM)
ocsp.apple.com (iOS initial configuration)
ocsp.globalsign.cloud (Certificate Authority)
ocsp.sectigo.net (Certificate Authority)
office.com (MS Office 365 products)
office.net (Microsoft)
office365.com (Required for MS cloud based email)
omniroot.com (Kaspersky 2016 Internet Security Browser Redirection)
onecare.live.com (Windows OneCare)
page.cotcdn.net (To fully load all of the graphics on the Avast download)
pandasecurity.com (AVG & Panda)
pandasoftware.com (Panda)
paypal.com (Paypal transactions)
paypalobjects.com (Paypal transactions)
pctools.com (PCTools-AntiVirus)
performable.com (Vipre AV)
phicdn.net (Certificate Authority)
photos-ugc.l.google.com (Used for screen-shots in the play store)

photos-ugc.l.googleusercontent.com (Used for screen-shots in the play store)

pki.goog (Certificate Authority)

play.google.com (Used for screen-shots in the play store)

public-trust.com (Certificate Authority)

rhocdn.net (Bit Defender)

rising-global.com (Rising-Antivirus)

safebrowsing.clients.google.com (MAC safe browsing blacklist)

safebrowsing.google.com (Certificate Authority)

safer-networking.org (Spyware Update Zones)

sb-ssl.google.com (Google Safebrowsing)

schemas.google.com (Google Authentication, Airwatch MDM)

securetrust.com (Certificate Authority)

securitywonks.net (Spyware Update Zones)

settings-win.data.microsoft.com (Windows Updates)

sfmirror.softlayer.com (Used by Clamwin for downloads)

slscr.update.microsoft.com (Windows Updates)

s-microsoft.com (Microsoft home page)

sophos.com (Sophos)

sophos.com.cn.lldns.net (Sophos)

sophosupd.com (Sophos)

sophosupd.com.cn.lldns.net (Sophos)

sophosupd.net (Sophos)

sophosupd.net.cn.lldns.net (Sophos)

sophosxl.net (Sophos)

sourceforge.mirror.iweb.ca (Used by Clamwin for downloads)

sourceforge.net (Used by Clamwin for downloads)

spybotupdates.com (Spyware Update Zones)

spynet.com (Spyware Update Zones)

ssl.google-analytics.com (Firefox can hang if cannot be reached)

ssl.gstatic.com (Samsung S4 requires to connect to wireless)

stackpathcdn.com (cname for ocsp.comodoca.com)

starfieldtech.com (Certificate Authority)

sunbeltsoftware.com (Antivirus Zone)

sunbelt-software.com (Antivirus Zone)

swisssign.net (Certificate Authority)
symantec.com (Antivirus Zone)
symantecliveupdate.com (Antivirus Zone)
symantecstore.com (Antivirus Zone)
symcb.com (Certificate Authority)
symcd.com (Certificate Authority)
s-msedge.net (MS Office 365 products)
t-msedge.net (Azure)
thawte.com (Certificate Authority)
themes.googleusercontent.com (Google Authentication, Airwatch MDM)
threattrack.com (For Vipre to download definitions (Vipre was sold to Threat Track))
time.windows.com (Anti Virus/Spyware/miscellaneous zone)
tlu.dl.delivery.mp.microsoft.com (Windows Updates)
tools.google.com (Google Authentication, Airwatch MDM)
trafficmanager.net (Azure DNS-based traffic load balancer. Used in Microsoft and Norton downloads)
trendmicro.com (Trend Micro)
trendsecure.com (Trend Micro)
trust-secure.com (Certificate Authority)
trustwave.com (Certificate Authority)
unmetered.org.uk (ClamXAV)
update.microsoft.com (Microsoft updates)
update.nai.com.att-idns.net (Antivirus Zone)
updatecenter.trafficmanager.net (Norton Updates)
useragent.com (Certificate Authority)
usertrust.com (Certificate Authority)
v0cdn.net (Certificate Authority)
v2cdn.net (Required to download Malwarebytes)
verisign.com (Certificate Authority)
verisign.net (Certificate Authority)
webroot.com (AVG)
windows.com (Microsoft Critical Updates)
windows.net (Microsoft Security Essentials)
windowsupdate.com (Microsoft Security Essentials)
windowsupdate.net (Microsoft Security Essentials)

windowsupdate.net (Microsoft Security Essentials)
wustat.net (Microsoft Security Essentials)
wustat.windows.com (Microsoft Security Essentials)
www3.l.google.com (Used for screen-shots in the play store)
zonealarm.com (AVG)

Azure Deployments

Domains listed in the below link may have to be added in order for clients in the isolation network to function properly.

<https://docs.microsoft.com/en-us/azure/azure-portal/azure-portal-safelist-urls?tabs=public-cloud>

Additional domains to add:

aka.ms
applicationinsights.io
azure.com
azure.net
azure-api.net
azuredatalakestore.net
azureedge.net
loganalytics.io
microsoftonline-p.com
msauth.net
msftauth.net
trafficmanager.net
visualstudio.com
asazure.windows.net
core.windows.net
database.windows.net
graph.windows.net
kusto.windows.net
search.windows.net
servicebus.windows.net
bing.com
msidentity.com

skype.com

live.com

omegacdn.net

t-msedge.net

nelreports.net

a-msedge.net

akagtm.org

fbsl-t-msedge.net

fbs1-t-msedge.net

l-msedge.net

akamaized.net

Refer to the **Azure Deployment Guide** for more information on deploying appliances.

Troubleshooting

Related KB Articles:

[Troubleshooting domain resolution in the captive portal](#)

[Troubleshooting domain resolution for agent communication](#)



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