Firewalls blocking CRL/OCSP certificate authority access (DMZ Mode)

- _General
- Hosts File IP Addresses

_General

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Background

All Cyber Crucible communications from the endpoint agents to the CC infrastructure is protected by TLS. The list of domains used by CC agents, and each domain’s function, is listed here:

Which domains are used by Cyber Crucible?

Access to those domains can be tested by an installer listed here:

How can I test connection to these domains?

Most of those domains listed are directly in control of by Cyber Crucible, and end in *.cybercrucible.com

A couple, notably the AWS Cognito domain required for some token and agent authorization capabilities, are not. Please note that, as of July 2025, agents no longer use Amazon Web Services (AWS) Cognito for machine-to-machine authentication.

By default, HTTPS libraries used by applications, including Cyber Crucible, verify the authenticity of TLS certificates by reaching out to the Certificate Authority (CA) servers via either CRL or OCSP.

This means that a firewall must not block the Certificate Authority domains either. These CA server domains typically service a large number of applications beyond Cyber Crucible, and can require additional justification from network security architect teams.

DMZ Mode

For environments in which the ability to adjust firewalls or other network security tools, to reduce or eliminate the number of tickets to the network security team, DMZ mode can be applied as a group setting.

DMZ mode enabled will do a few things:

- Insert the CA chains into any installer created for that group automtically.

- Automatically install the CA chain files into Cyber Crucible’s folders.
- Automatically protect the CA chain files with Cyber Crucible’s kernel level anti-tampering technology.
- Automatically configure the Cyber Crucible network communications to rely on the installed CA chain files for TLS certificate (HTTPS) verification.
- Automatically enable a service to ensure the CA Chains are maintained.

Enabling DMZ Mode for currently deployed agents

Turning on DMZ mode for a group with pre-deployed agents will attempt to task all existing agents to use the CA files, without user involvement.

This works as long as the agents are currently able to authenticate with CC infrastructure such as to receive this tasking. This means the agents currently do NOT need DMZ mode enabled, but will in the future. The likely scenario is either movement of the agents to a more restrictive firewall environment, or a desire to remove the existing firewall rules.

Enabling DMZ mode to CC agents which currently cannot authenticate due to CRL/OCSP errors in the CC service logs (likely found in C:\Program Files\CyberCrucible\service_log.0 or .1, etc), will not correct the matter. This can cause a chicken-or-the-egg scenario, if network security rules may not be adjusted at least temporarily, to allow the CC agents to receive the tasking to download and configure the CA chain files.

“Fire escape” method for enabling DMZ Mode for currently deployed agents

There are circumstances where Cyber Crucible agents are deployed without DMZ mode enabled, that cannot receive tasking, and which changing firewall rules to accommodate (even temporarily) to allow agents to receive DMZ tasking is difficult.

In those situations, please find the following digitally signed PowerShell script.

Three baseline requirements for this script to work:

1. This script must be run when the driver is disabled. This probably means Safe Mode, and NOT with Safe Mode Protection enabled in the CC portal. If it is enabled, please contact your Cyber Crucible support resources for assistance with a workaround.

2. This script must have the ability to contact "http://agent.tasking.rpp.cybercrucible.com/public/latestCARoots"
3. This script is digitally signed, so altering the script will cause it to not run by default.

```
if ((driverquery /v | Select-String "CCRRSecMon").Matches.Length -gt 0) {
    Write-Error "Cyber Crucible is running."
    Write-Error "This script only works in safe mode with Cyber Crucible configured to not run i
    exit
}

$installPath = Get-ItemPropertyValue -ErrorAction SilentlyContinue -Path "Registry::HKEY_LOCAL_M
if ([string]::IsNullOrEmpty($installPath)) {
    Write-Error "Failed to get install path.  Is Cyber Crucible installed?"
    exit
}
Write-Host "CC Install path: $installPath"

Write-Host "Fetching CA bundle..."
$json = (Invoke-WebRequest "http://agent.tasking.rpp.cybercrucible.com/public/latestCARoots").Co
if ([string]::IsNullOrEmpty($json)) {
    Write-Error "Failed to get CA roots."
    exit
}

Write-Host "Encoding CA bundle..."

$b64 = [System.Convert]::ToBase64String([System.Text.Encoding]::UTF8.GetBytes($json))
if ([string]::IsNullOrEmpty($b64)) {
    Write-Error "Encoding error."
    exit
}

$standardAlphabet = "ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/="
$ccAlphabet = [byte[]](0x01,0x02,0x03,0x04,0x05,0x06,0x07,0x08,0x09,0x0a,0x0b,0x0c,0x0d,0x11,0x1
$b64 = ($b64.ToCharArray() | ForEach-Object {
    $index = $standardAlphabet.IndexOf($_)
    $ccAlphabet[$index]
})

$persist = New-Item -Force -Path $installPath -Name "persist" -ItemType "Directory"
if (-Not $persist.Exists) {
    Write-Error "Inner directory missing."
}

try {
    Set-Content -Value $b64 -Path "$installPath\persist\dmz.dat" -Encoding byte
    Write-Host "Updated CA bundle."
} catch {
    exit
}
```

```
try {
    Set-ItemProperty -Path "Registry::HKEY_LOCAL_MACHINE\SOFTWARE\CyberCrucibleAgent" -Name "dmz
    Write-Host "Enabled DMZ mode."
} catch {
    exit
}

Write-Host -ForegroundColor Green "Success!  Please disable safe mode and reboot."

# SIG # Begin signature block
# MIISPAYJKoZIhvcNAQcCoIISLTCCEikCAQExCzAJBgUrDgMCGgUAMGkGCisGAQQB
# gjcCAQSgWzBZMDQGCisGAQQBgjcCAR4wJgIDAQAABBAfzDtgWUsITrck0sYpfvNR
# AgEAAgEAAgEAAgEAAgEAMCEwCQYFKw4DAhoFAAQUhmrUkJGB8aa0XQHFmv9zAjy6
# 2Ceggg6IMIIGsDCCBJigAwIBAgIQCK1AsmDSnEyfXs2pvZOu2TANBgkqhkiG9w0B
# AQwFADBiMQswCQYDVQQGEwJVUzEVMBMGA1UEChMMRGlnaUNlcnQgSW5jMRkwFwYD
# VQQLExB3d3cuZGlnaWNlcnQuY29tMSEwHwYDVQQDExhEaWdpQ2VydCBUcnVzdGVk
# IFJvb3QgRzQwHhcNMjEwNDI5MDAwMDAwWhcNMzYwNDI4MjM1OTU5WjBpMQswCQYD
# VQQGEwJVUzEXMBUGA1UEChMORGlnaUNlcnQsIEluYy4xQTA/BgNVBAMTOERpZ2lD
# ZXJ0IFRydXN0ZWQgRzQgQ29kZSBTaWduaW5nIFJTQTQwOTYgU0hBMzg0IDIwMjEg
# Q0ExMIICIjANBgkqhkiG9w0BAQEFAAOCAg8AMIICCgKCAgEA1bQvQtAorXi3XdU5
# WRuxiEL1M4zrPYGXcMW7xIUmMJ+kjmjYXPXrNCQH4UtP03hD9BfXHtr50tVnGlJP
# DqFX/IiZwZHMgQM+TXAkZLON4gh9NH1MgFcSa0OamfLFOx/y78tHWhOmTLMBICXz
# ENOLsvsI8IrgnQnAZaf6mIBJNYc9URnokCF4RS6hnyzhGMIazMXuk0lwQjKP+8bq
# HPNlaJGiTUyCEUhSaN4QvRRXXegYE2XFf7JPhSxIpFaENdb5LpyqABXRN/4aBpTC
# fMjqGzLmysL0p6MDDnSlrzm2q2AS4+jWufcx4dyt5Big2MEjR0ezoQ9uo6ttmAaD
# G7dqZy3SvUQakhCBj7A7CdfHmzJawv9qYFSLScGT7eG0XOBv6yb5jNWy+TgQ5urO
# kfW+0/tvk2E0XLyTRSiDNipmKF+wc86LJiUGsoPUXPYVGUztYuBeM/Lo6OwKp7AD
# K5GyNnm+960IHnWmZcy740hQ83eRGv7bUKJGyGFYmPV8AhY8gyitOYbs1LcNU9D4
# R+Z1MI3sMJN2FKZbS110YU0/EpF23r9Yy3IQKUHw1cVtJnZoEUETWJrcJisB9IlN
# Wdt4z4FKPkBHX8mBUHOFECMhWWCKZFTBzCEa6DgZfGYczXg4RTCZT/9jT0y7qg0I
# U0F8WD1Hs/q27IwyCQLMbDwMVhECAwEAAaOCAVkwggFVMBIGA1UdEwEB/wQIMAYB
# Af8CAQAwHQYDVR0OBBYEFGg34Ou2O/hfEYb7/mF7CIhl9E5CMB8GA1UdIwQYMBaA
# FOzX44LScV1kTN8uZz/nupiuHA9PMA4GA1UdDwEB/wQEAwIBhjATBgNVHSUEDDAK
# BggrBgEFBQcDAzB3BggrBgEFBQcBAQRrMGkwJAYIKwYBBQUHMAGGGGh0dHA6Ly9v
# Y3NwLmRpZ2ljZXJ0LmNvbTBBBggrBgEFBQcwAoY1aHR0cDovL2NhY2VydHMuZGln
# aWNlcnQuY29tL0RpZ2lDZXJ0VHJ1c3RlZFJvb3RHNC5jcnQwQwYDVR0fBDwwOjA4
# oDagNIYyaHR0cDovL2NybDMuZGlnaWNlcnQuY29tL0RpZ2lDZXJ0VHJ1c3RlZFJv
# b3RHNC5jcmwwHAYDVR0gBBUwEzAHBgVngQwBAzAIBgZngQwBBAEwDQYJKoZIhvcN
# AQEMBQADggIBADojRD2NCHbuj7w6mdNW4AIapfhINPMstuZ0ZveUcrEAyq9sMCcT
# Ep6QRJ9L/Z6jfCbVN7w6XUhtldU/SfQnuxaBRVD9nL22heB2fjdxyyL3WqqQz/WT
# auPrINHVUHmImoqKwba9oUgYftzYgBoRGRjNYZmBVvbJ43bnxOQbX0P4PpT/djk9
# ntSZz0rdKOtfJqGVWEjVGv7XJz/9kNF2ht0csGBc8w2o7uCJob054ThO2m67Np37
# 5SFTWsPK6Wrxoj7bQ7gzyE84FJKZ9d3OVG3ZXQIUH0AzfAPilbLCIXVzUstG2MQ0
# HKKlS43Nb3Y3LIU/Gs4m6Ri+kAewQ3+ViCCCcPDMyu/9KTVcH4k4Vfc3iosJocsL
# 6TEa/y4ZXDlx4b6cpwoG1iZnt5LmTl/eeqxJzy6kdJKt2zyknIYf48FWGysj/4+1
# 6oh7cGvmoLr9Oj9FpsToFpFSi0HASIRLlk2rREDjjfAVKM7t8RhWByovEMQMCGQ8
# M4+uKIw8y4+ICw2/O/TOHnuO77Xry7fwdxPm5yg/rBKupS8ibEH5glwVZsxsDsrF
# hsP2JjMMB0ug0wcCampAMEhLNKhRILutG4UI4lkNbcoFUCvqShyepf2gpx8GdOfy
# 1lKQ/a+FSCH5Vzu0nAPthkX0tGFuv2jiJmCG6sivqf6UHedjGzqGVnhOMIIH0DCC
# BbigAwIBAgIQBxoxP5I/FN11CdiDj62hWTANBgkqhkiG9w0BAQsFADBpMQswCQYD
# VQQGEwJVUzEXMBUGA1UEChMORGlnaUNlcnQsIEluYy4xQTA/BgNVBAMTOERpZ2lD
# ZXJ0IFRydXN0ZWQgRzQgQ29kZSBTaWduaW5nIFJTQTQwOTYgU0hBMzg0IDIwMjEg
```

```
# Q0ExMB4XDTI1MDEyMzAwMDAwMFoXDTI1MTAyOTIzNTk1OVowgdgxEzARBgsrBgEE
# AYI3PAIBAxMCVVMxGTAXBgsrBgEEAYI3PAIBAhMIRGVsYXdhcmUxHTAbBgNVBA8M
# FFByaXZhdGUgT3JnYW5pemF0aW9uMRAwDgYDVQQFEwc1NjQ4MDE4MQswCQYDVQQG
# EwJVUzEVMBMGA1UECBMMUGVubnN5bHZhbmlhMRMwEQYDVQQHEwpQaXR0c2J1cmdo
# MR0wGwYDVQQKExRDeWJlciBDcnVjaWJsZSwgSW5jLjEdMBsGA1UEAxMUQ3liZXIg
# Q3J1Y2libGUsIEluYy4wggIiMA0GCSqGSIb3DQEBAQUAA4ICDwAwggIKAoICAQCc
# gp0cezRZCGf8V3Uq625Qtx17DpHQGPSy0qj0J/BJ1vKuaYkvMlh7tvzyakZm4e88
# clObk/99sz2Xz6+Gs00JmY32CYPVQ9crpliTHco1/Pde65kg0otHe9IvSQJAyrbz
# J3PwnZB8tgFkWKkhaz7MSIjUmiZmrxDJ3Wzhga/87mH3RinBMY5d5C6TahBSyn5p
# RGkzDokJ6zyTeh/XiI72RDH/SHGpfCgAfIz/dHuvZddp5YJ9QLhym5c65VfNHIZr
# c8B9fvit6ADVXJbYfp1DR6C2WogfIJWXo5as+IuHm263qX96+ZoHR1jnTBegUCx6
# z9yqIA1b5bwvWCRse9pFidWFjHVaEX/+eBKDeIeoFPsps+o3E4rGnrB4sDPNd6VZ
# DqM9ddzkHNG5xWWXRIDx82GOVhyqGe8Ma26Je8ks95auuhB+Fpf7kqU80seX9Fqu
# QaWqzz4PywddTmo3eigbdYOcwvYGf5zJh7aouzlEpZBXLvvAozXlpvLFTAU/LoCH
# MkSnEHhY9wY9T40VKHxUG6YYYeydSeqdfV6fXrWfZwJbzsu1DKuUL92lNSlln+Zi
# AFP1BB0hHdE3+p1nKztvGrJPCkRmZfb0TuQcl5PMMpmkjCQhebBjXVLbzka7kALt
# QuXy9guLofly+WrlrLeAyC+mSy6KdAPlmn7jKYmGAwIDAQABo4ICAjCCAf4wHwYD
# VR0jBBgwFoAUaDfg67Y7+F8Rhvv+YXsIiGX0TkIwHQYDVR0OBBYEFMkijav6RdNE
# 3S+ZDCp309eOIGDdMD0GA1UdIAQ2MDQwMgYFZ4EMAQMwKTAnBggrBgEFBQcCARYb
# aHR0cDovL3d3dy5kaWdpY2VydC5jb20vQ1BTMA4GA1UdDwEB/wQEAwIHgDATBgNV
# HSUEDDAKBggrBgEFBQcDAzCBtQYDVR0fBIGtMIGqMFOgUaBPhk1odHRwOi8vY3Js
# My5kaWdpY2VydC5jb20vRGlnaUNlcnRUcnVzdGVkRzRDb2RlU2lnbmluZ1JTQTQw
# OTZTSEEzODQyMDIxQ0ExLmNybDBToFGgT4ZNaHR0cDovL2NybDQuZGlnaWNlcnQu
# Y29tL0RpZ2lDZXJ0VHJ1c3RlZEc0Q29kZVNpZ25pbmdSU0E0MDk2U0hBMzg0MjAy
# MUNBMS5jcmwwgZQGCCsGAQUFBwEBBIGHMIGEMCQGCCsGAQUFBzABhhhodHRwOi8v
# b2NzcC5kaWdpY2VydC5jb20wXAYIKwYBBQUHMAKGUGh0dHA6Ly9jYWNlcnRzLmRp
# Z2ljZXJ0LmNvbS9EaWdpQ2VydFRydXN0ZWRHNENvZGVTaWduaW5nUlNBNDA5NlNI
# QTM4NDIwMjFDQTEuY3J0MAkGA1UdEwQCMAAwDQYJKoZIhvcNAQELBQADggIBAI02
# vz6Zr2BevD2bIH1qp/HoayEZmaDxFZbaJAOJGp2aa1o+I8jDFogpMw/sXg3tvU8i
# l32/zDZjVj3g2AIfGnyVaFaVyQTUXMk+F/ODbsK9WogqV11ZopNO5aO1dvYKd5A8
# +fHOgNDswEvUH6dqMrJuH11PU1hXDC2843Qb49SmBqKrY01ZvHMWL4IR6NDCPsa8
# FyVapgwrYdvdYw5tA9r9eVkXzMXfSwT9yMUegZAW/Z6HSE2LPPyXWSUHPT0b8D8e
# pWjmM8ruv4G3TbXZrgYIFBkVPQp9hd1MyUoYYPMTMUir3Zn/Ca7ak2rkE5Hch0+Q
# +a0Ly4vS469ezh/PikriNwTy9zhSsCAnF/T5In6X8lPCoN4m4Ex0lWEqtp5K+bD2
# Oogz2OBfHXTuIhujI0XMZqNWzyfE1iZ4S48G9Y8BBqk9KCY3P379CMBRlsrshOVE
# OT98+zV3YEvDeAJrEDzvKzCBbeER086sGsPX6hRRtJ1x+XCbV+/2YJWW/y0/EsQ4
# tKVWYW5DKQLZsJ66Co8qGKRy9RkHEps2BMrSaAopCbDkNnbVNiOPNZgMw6lXYbt2
# yLGOhA/XNV6hBjSrkuO1hyXWu1Q0Let96IaGwYEIpMR/sHAUki+JjIh/ObdnjboZ
# DlvFCdMHpB7KvGVrcz0e600ACDVubDjn2jbE5T5aMYIDHjCCAxoCAQEwfTBpMQsw
# CQYDVQQGEwJVUzEXMBUGA1UEChMORGlnaUNlcnQsIEluYy4xQTA/BgNVBAMTOERp
# Z2lDZXJ0IFRydXN0ZWQgRzQgQ29kZSBTaWduaW5nIFJTQTQwOTYgU0hBMzg0IDIw
# MjEgQ0ExAhAHGjE/kj8U3XUJ2IOPraFZMAkGBSsOAwIaBQCgeDAYBgorBgEEAYI3
# AgEMMQowCKACgAChAoAAMBkGCSqGSIb3DQEJAzEMBgorBgEEAYI3AgEEMBwGCisG
# AQQBgjcCAQsxDjAMBgorBgEEAYI3AgEVMCMGCSqGSIb3DQEJBDEWBBToaMqnekbD
# 9TNL+/F9FUVmT/wKpzANBgkqhkiG9w0BAQEFAASCAgCWUhYp7TV+jnFD0x3Ep+vL
# /tn8ZW5LpurXf3/IzAA1GhiRy5Kv0D/3fgvV7JvO/ASMwbmOGqhnfkzj5A7G41JA
# sZc18Bd+cz1bvuKd5ykUwhkQQOt3Ha2yBsazwMGarZmPK6SE/NRp0pt2ZyPjr1A6
# kJROiXOrUDAuFAGLZNAhnkhjtBu/x7Uq+8QOaYCXlulNcO1pkmHiELtMapq0Zx5k
# pj+FYJT6tERBpp+79eE37eMpXU3paYJzHziq5vXS6aoaEQrxcvdMTXzzOZS5w+AR
# YAooJCSHahONsyeDdaQC0djLi2mFOmt1eIlJATk6DyjC4N2Lu2ezXte3JH1Jqt1V
# dDNcWmmzNKHAeSdX7OZjKSc44n9sMWA7wvLBxIYjqym3Qs5+VoMs91ODi31WDMtF
# 8OjS9zYxAmnJrMdV6stZQ4XLCN4/KQTCe7ioK7/PcTGNcBMNl5QIRsMWJ8dpqo0V
```

```
# S7TNN+19Ou9QkDeTQOc2C2ZVIMf43DNtkBFl2fvL+pZtH3IzMk+Ddpv1izJ4DV1y
# p7qsxRlK9y4Idt+OKIorQLtMiGGDreeKZkNLKVz5is8YrjJ6kMwr1djhNeG+ylK2
# FTZJhuybB22z7fRoC7Z1JBwBoGhiwvjFSI+MJh9cbJN2X5lTXazxvkK7QJSkcqwh
# 23476c/iOV1mHRRSCpvDKA==
# SIG # End signature block
```

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Atlassian

Hosts File IP Addresses

Notice

> These IP addresses are up to date as of **August, 2025**. But are liable to change. It is important that these IPs are used only for testing communication errors, and that DNS resolution failures are actually resolved. These IPs are liable to change in the future, particularly due to load balancing.
>
> Note that deprecated domain names/services, such as Amazon Cognito are not provided.

Domain ?? IP Addresses: Hosts File Format

For an up to date list of required domains, please see

https://support.jira.cybercrucible.com/servicedesk/customer/portal/1/article/34603009

The following IPs are required by the **Cyber Crucible Agent** for endpoints' connectivity.

```
151.181.219.152 agent.oauth.rpp.cybercrucible.com
151.181.219.153 agent.tasking.rpp.cybercrucible.com
34.210.57.13    installerfiles.rpp.cybercrucible.com
```