## Java Applications Timeout through Zero Trust Network Access (ZTNA) Module for Secure Access

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### Introduction

This document describes the issue faced when accessing Secure Access private resources through Java Applications.

## Prerequisites

#### Requirements

Cisco recommends that you have knowledge of these topics:

- Zero Trust Network Access (ZTNA)
- Secure Access
- Secure Client

#### **Components Used**

The information in this document is based on these software and hardware versions:

- Windows 10
- Windows 11
- Secure Client Version 5.1.2.42
- Secure Client Version 5.1.3.62
- Secure Client Version 5.1.4.74

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## **Background Information**

Secure Access allows access to private resources through different deployment types, one of them is through Secure Client ZTNA Module.

This document assumes that you have already configured private resources to be accessed through a Java based application.

# **Problem: Private resources are not accessible through ZTNA module using Java based application.**

When accessing private resources through Java applications, the connection is timing out, or resulting in very slow connection.

This is caused by the IPv4 mapping to IPv6 that is done by default by the Java software. while ZTNA does not support intercepting IPv6, the connection fail in initial process.

## Solution

Configure the java variables on your source computer, to prevent java applications from performing IPv4 to IPv6 mappings.

#### Windows OS

Step 1: Access the Control Panel -> System -> Advanced System Settings -> Environment Variables

variable	Value		
OneDrive	C:\Users\Fuad\OneDrive		
Path	C:\Users\Fuad\AppData\Local\Microsoft\WindowsApps;		
TEMP	C:\Users\Fuad\AppData\Local\Temp		
TMP	C:\Users\Fuad\AppData\Local\Temp		
stem variables	New Edit Delete		
stem variables Variable	New Edit Delete Value	^	
stem variables Variable ComSpec	New     Edit     Delete       Value     C:\Windows\system32\cmd.exe	^	
stem variables Variable ComSpec DriverData	New     Edit     Delete       Value     C:\Windows\system32\cmd.exe     C:\Windows\System32\DriverData	^	
stem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS	New     Edit     Delete       Value     C:\Windows\system32\cmd.exe     C:\Windows\System32\Drivers\DriverData       4     4	^	
stem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS	New     Edit     Delete       Value     C:\Windows\system32\cmd.exe       C:\Windows\System32\Drivers\DriverData       4       Windows_NT	^	
stem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path	New     Edit     Delete       Value       C:\Windows\system32\cmd.exe       C:\Windows\System32\Drivers\DriverData       4       Windows_NT       C:\Windows\system32\C:\Windows;C:\Windows\System32\Wbem;       C:\Windows\system32\C:\Windows;C:\Windows\System32\Wbem;	^	
stem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT	New     Edit     Delete       Value     C:\Windows\system32\cmd.exe       C:\Windows\System32\Drivers\DriverData       4       Windows_NT       C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;       .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC       AMD64		
stem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR ARCHITECTURE	New     Edit     Delete       Value     C:\Windows\system32\cmd.exe       C:\Windows\System32\Drivers\DriverData       4       Windows_NT       C:\Windows\system32; C:\Windows; C:\Windows\System32\Wbem;       .COM; EXE, BAT; .CMD; .VBS; .VBE; .JS; .JSE; .WSF; .WSH; .MSC       AMD64		

**Step 2:** Define the two system variables:

Variable Name: \_JAVA\_OPTIONS Variable Value: -Djava.net.preferIPv4Stack=true

New User Variable		
Variable name: JA	VA_OPTIONS	
Variable value: -Dj	ava.net.preferIPv4Stack=true	
Browse Directory	Browse File	OK Cancel
L COUDOF(	COMINIONSISUSIENDZACINI	

of	New User Variable		×
>			
	Variable name:	JAVA_TOOL_OPTIONS	
	Variable value:	-Djava.net.preferlPv4Stack=true	
a			
s	Browse Directory	Browse File	OK Cancel
ļ	Computer	C;\\mindows\systemp2\cmd.exe	

#### Mac OS

This line can be added to either /etc/profile (global) or to ~/.profile (user-specific).

```
export _JAVA_OPTIONS="-Djava.net.preferIPv4Stack=true"
export JAVA_TOOL_OPTIONS="-Djava.net.preferIPv4Stack=true"
```

### **Related Information**

- <u>Secure Access Documentation</u>
- <u>Technical Support & Documentation Cisco Systems</u>