# **United States Coast Guard (USCG)**

CG CYBER NOSC-AMT



# VDI Remote Access for macOS Catalina/Mojave Installation Guide

September 9, 2020

**Approved for Internet Release** 

Revision	Date	Comments
1.0	September 9, 2020	Initial document

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# Introduction

This guide provides instructions on how to install and configure VDI Remote Access software on personal macOS computers. This guide is not for standard workstations that connect to CGOne. Standard workstations are automatically configured for VDI Remote Access.

OpenSSL is an open source cryptographic utility that verifies that the downloaded Department of Defense-specific root and intermediate Certificate Authority (CA) certificates are authentic and have not been tampered with.

The Keychain Access utility provides a graphical user interface for managing CA certificates in the operating system's certificate store. All public certificates installed with this application are considered unclassified.

VMware Horizon Client provides secure access to a virtual desktop connected to CGOne. The VMware Horizon Client software isolates the virtual desktop from the computer running the software.

### A. Symbols

The following symbols may be used in this document:

Name	Description	Name	Description
	Caution: Exception and/or important direction/information	0	Note: Need to Know or Helpful Information
STOP	Warning: Read and/or take action <u>is</u> required	50	Red rectangular and circular shapes are used to highlight an area of the screenshot

### **B.** Prerequisites

For VDI Remote Access to be properly downloaded and installed, ensure you have the following:

- 1. CAC reader
- Administrator rights to your mac
- 3. Internet connection (for Chapter 3)
- Completely removed all previous CAC software (ActivClient, OpenSC, CACKey, etc), and DoD CA's from Keychain. Instructions can be found at

militarycac.com/macuninstall.htm

### **C. Support**

SBU CGOne Support: The Centralized Service Desk can not provide VDI installation support for personal computers. Additional information on installing VDI on personal computers can be found on the CG Portal at:

https://cg.portal.uscg.mil/units/tiscom/Services/SitePages\_EISI/Virtual\_Desktop.aspx

**CAC Support:** To obtain support for the CAC reader and drivers, users must contact their respective Base C4IT Support Department (BCD)/Electronic Software Distribution. Additionally, the local Supporting Personnel Office will resolve CAC issues (locked card, etc.).

# **Chapter 1: Verify Smart Card Reader OS Compatibility**

Certain card readers require updated firmware or drivers to function properly with macOS. Use the following procedure to verify your system and smart card reader are compatible.



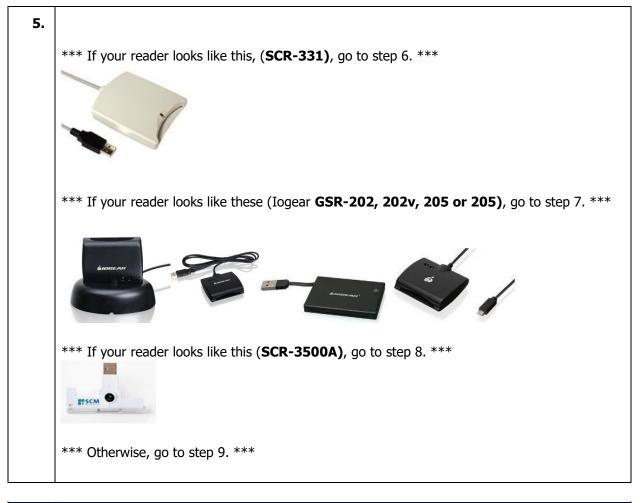




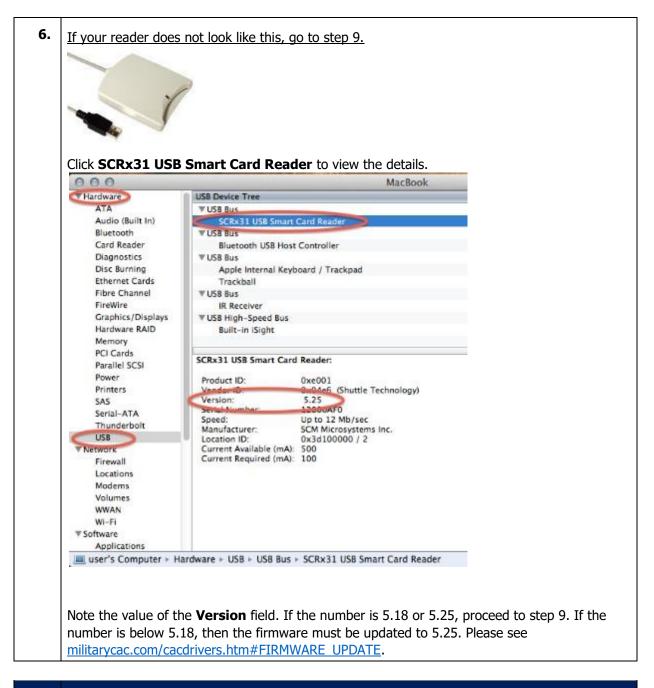
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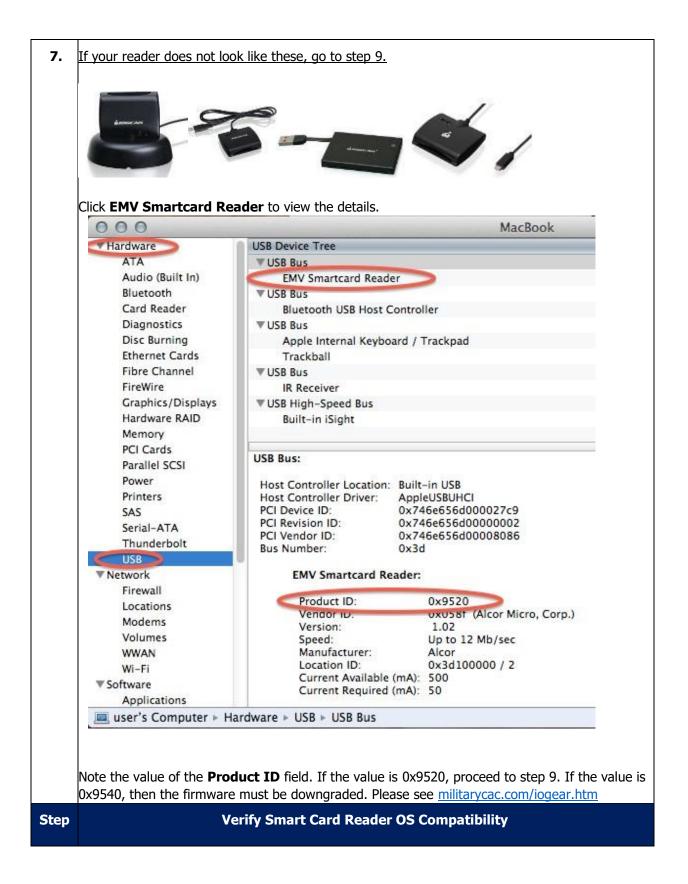


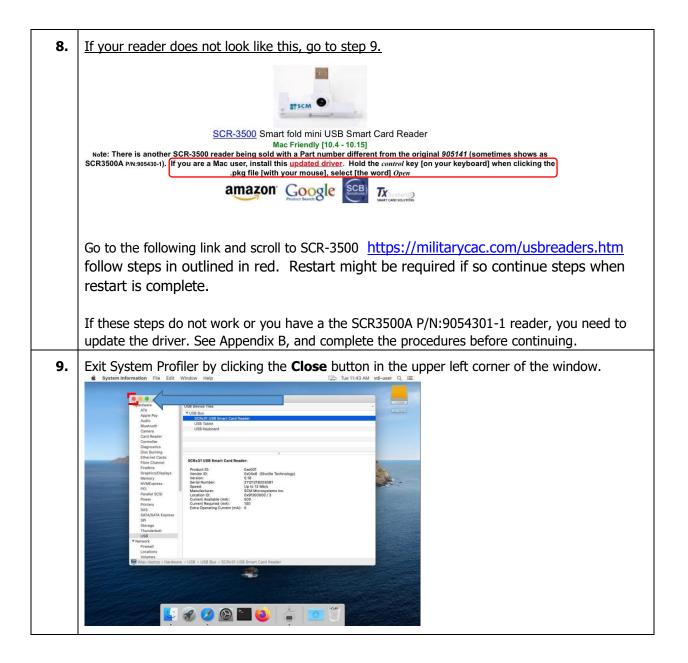
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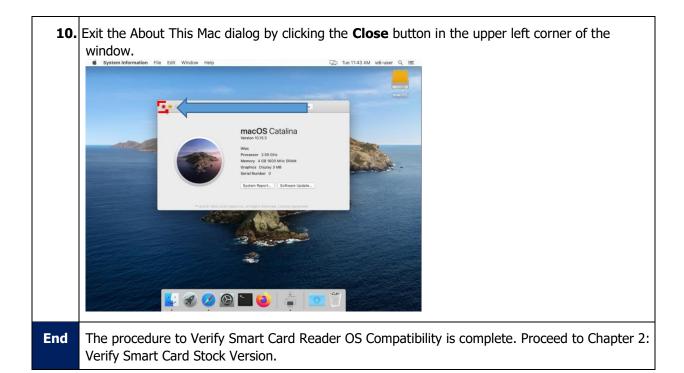




Verify Smart Card Reader OS Compatibility







# **Chapter 2: Verify Smart Card Stock Version**

Only newer smart cards are supported for macOS. Use these procedures to verify that a supported smart card is being used

Step	Verify Smart Card Stock Version
1.	Turn over smart card to the back, and observe the card stock version in the upper left corner.
2.	If the version doesn't match one of these, then a new smart card must be obtained from an ID Card Office.
	Oberthur ID One 128 v5.5 Dual Oberthur ID One 128 v5.5a D
	G&D FIPS 201 SCE 3.2 G+D FIPS 201 SCE 7.0
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End The procedure to Verify Smart Card Stock Version is complete. Proceed to Chapter 3: Download Required Software.

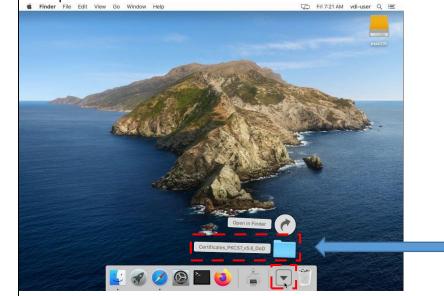
### **Chapter 3: Download Required Software**

Use the following procedure to access the DoD Cyber Exchange and VMware from the computer you will be working remotely with to obtain the certificate and program files to download and install for VDI Remote Access.

Step	Download Required Software
1.	On your home computer, use the Safari browser to open the following link: <u>https://dl.dod.cyber.mil/wp-content/uploads/pki-pke/zip/unclass-</u> <u>certificates_pkcs7_v56_dod.zip</u> If the direct link is inaccessible go to <u>https://public.cyber.mil/pki-pke/end-users/getting-</u> <u>started/cross-cert-chaining/</u>
	<complex-block></complex-block>

Ste Download Required Software

**3.** Confirm the file has successfully downloaded and unzipped by clicking the Download icon on the Dock. The uncompressed folders should be visible.



**4.** Open file location and install the following files double click each certificate bundle and install to login, import all the .pem and .p7b files into the keychain.

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6. You are now at the VMware **Download VMware Horizon Clients** page, where the VDI software files are located.

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#### **Download Required Software**

7. Navigate down the page and expand the VMware Horizon Client for Mac section (if not already).

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End The procedure to Download Required Software is complete. Proceed to Chapter 4: Install DoD CA Certificates - OS.

# **Chapter 4: Trust DoD CA Certificates - OS**

Use the following procedure to install the DoD CA Certificates into the operating system's trusted store.





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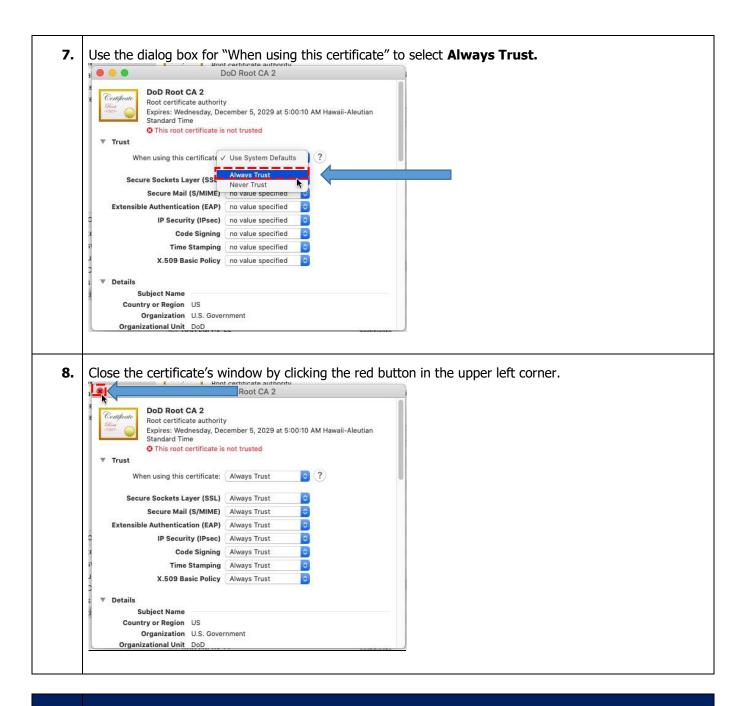
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#### **Trust DoD CA Certificates - OS**

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		DOD ID CA-52		certificate	Apr 2, 2025 at 3:38:32 AM	login
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		DOD ID SW CA		certificate	Sep 22, 2021 at 3:44:42	login
		DOD ID SW CA		certificate	Sep 23, 2021 at 5:23:05	login
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Step

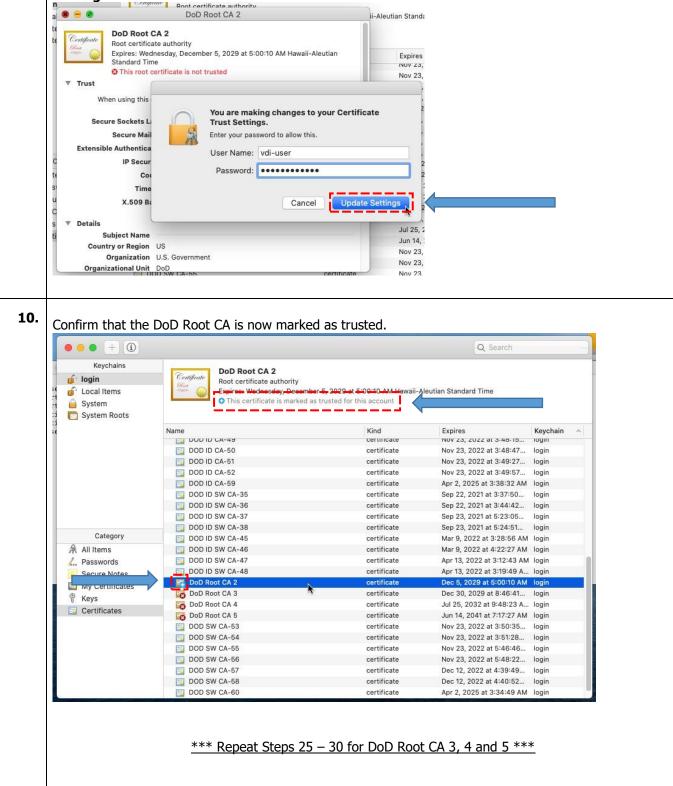
#### **Trust DoD CA Certificates - OS**



Step

#### **Trust DoD CA Certificates - OS**

**9.** The following screen will appear. Enter password to confirm the trust change, and click **Update Settings.** 



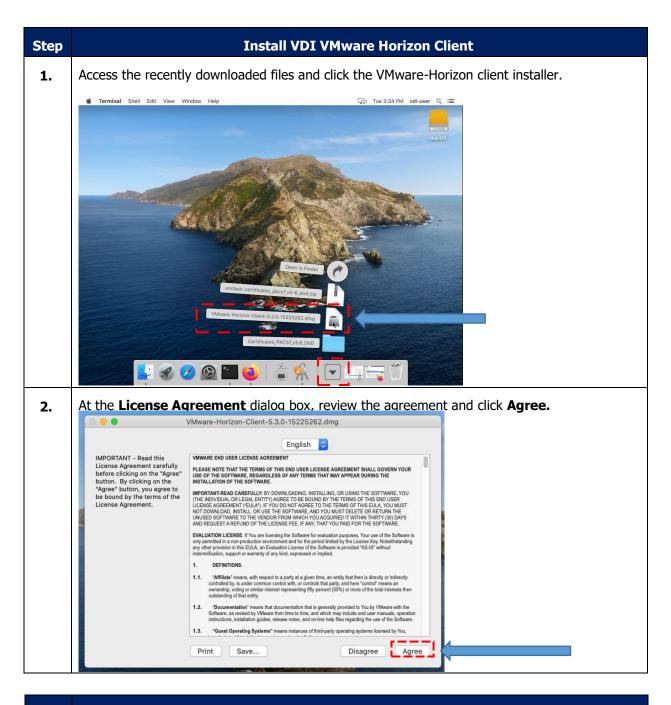
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	Name	Kind	Expires	Keychain ^
		ceruncate	1404 23, 2022 at 3.46.15	login
	DOD ID CA-50	certificate	Nov 23, 2022 at 3:48:47	login
	DOD ID CA-51	certificate	Nov 23, 2022 at 3:49:27	login
	DOD ID CA-52	certificate	Nov 23, 2022 at 3:49:57	login
	DOD ID CA-59	certificate	Apr 2, 2025 at 3:38:32 AM	login
	DOD ID SW CA-35	certificate certificate	Sep 22, 2021 at 3:37:50	login
		certificate	Sep 22, 2021 at 3:44:42 Sep 23, 2021 at 5:23:05	login
	DOD ID SW CA-37	certificate	Sep 23, 2021 at 5:23:05 Sep 23, 2021 at 5:24:51	login
Category	DOD ID SW CA-38	certificate	Mar 9, 2022 at 3:28:56 AM	
All Items	DOD ID SW CA-46	certificate		login
2. Passwords	DOD ID SW CA-47	certificate	Apr 13, 2022 at 3:12:43 AM	
Secure Notes	DOD ID SW CA-48	certificate	Apr 13, 2022 at 3:19:49 A	
	DoD Root CA 2	certificate		login
My Certificates	DoD Root CA 3	certificate	Dec 30, 2029 at 8:46:41	login
<b>?</b>	DoD Root CA 4	certificate	Jul 25, 2032 at 9:48:23 A	login
Certificates	DoD Root CA 5	certificate	Jun 14, 2041 at 7:17:27 AM	login
	DOD SW CA-53	certificate	Nov 23, 2022 at 3:50:35	login
	DOD SW CA-54	certificate	Nov 23, 2022 at 3:51:28	login
	DOD SW CA-55	certificate	Nov 23, 2022 at 5:46:46	login
	DOD SW CA-56	certificate	Nov 23, 2022 at 5:48:22	login
	DOD SW CA-57	certificate	Dec 12, 2022 at 4:39:49	login
	DOD SW CA-58	certificate	Dec 12, 2022 at 4:40:52	login
	DOD SW CA-60	certificate	Apr 2, 2025 at 3:34:49 AM	login

# **Chapter 5: Install VDI VMware Horizon Client**

Use the following procedure to update the VMware Horizon Client.

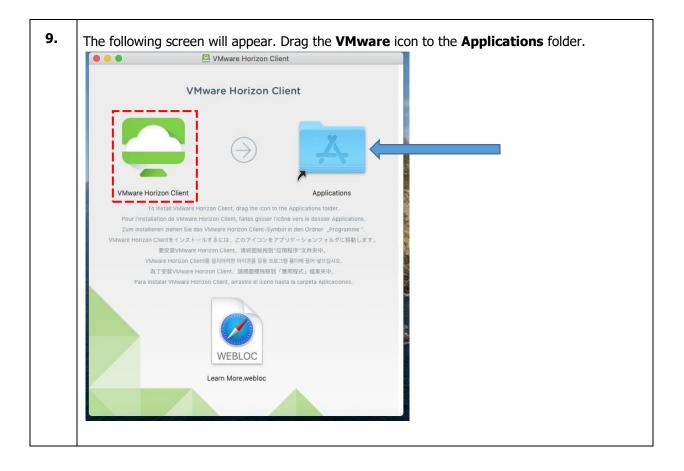


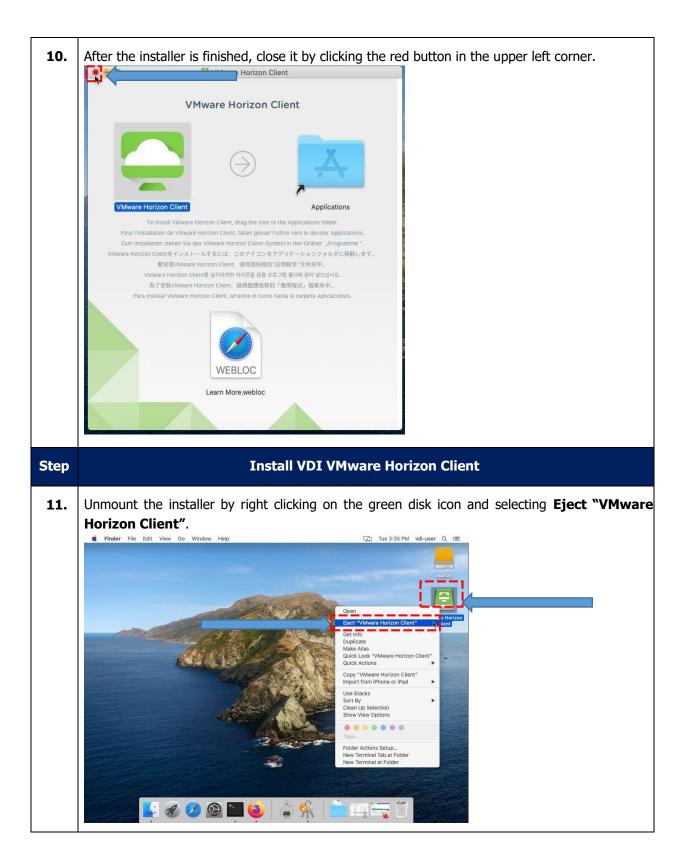
Install VDI VMware Horizon Client



Step

#### **Install VDI VMware Horizon Client**

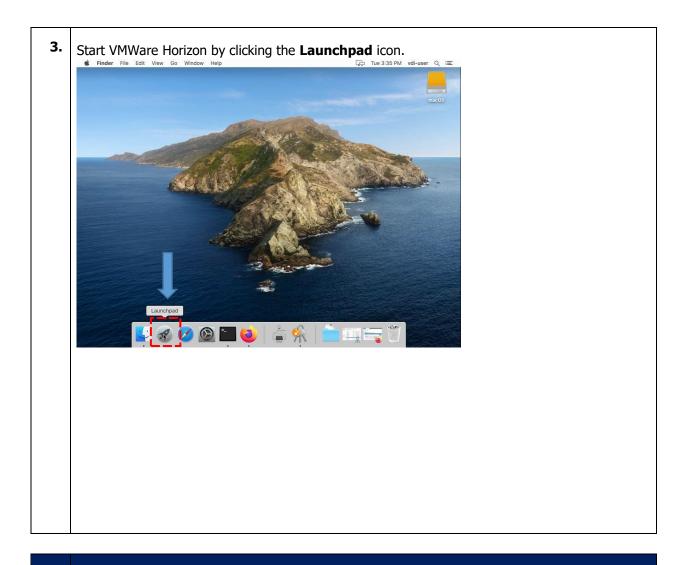




# **Chapter 6: Connecting to VDI**

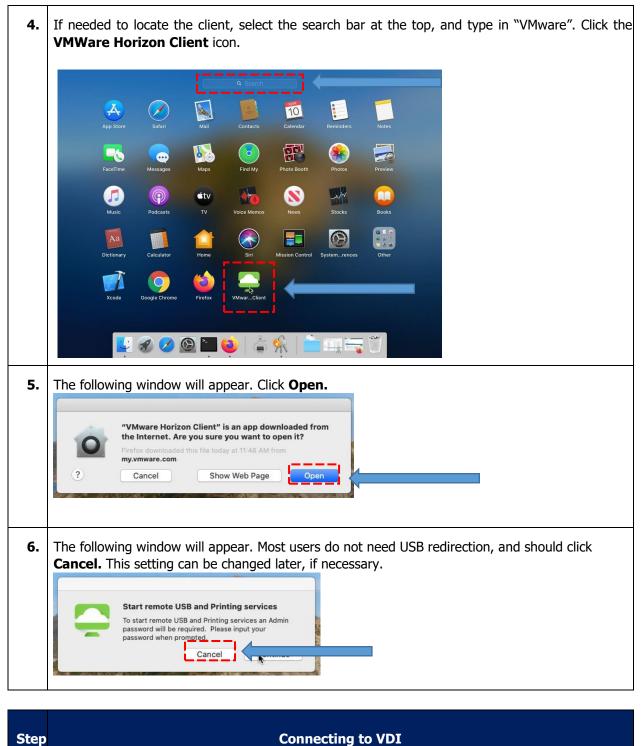
Use the following procedure to initially access VDI with the VMware Horizon Client. Several steps will only need to be performed the first time the program is run.

Step	Connecting to VDI
1.	Plug your smart card reader into the computer.
2.	Insert your CAC into the reader.

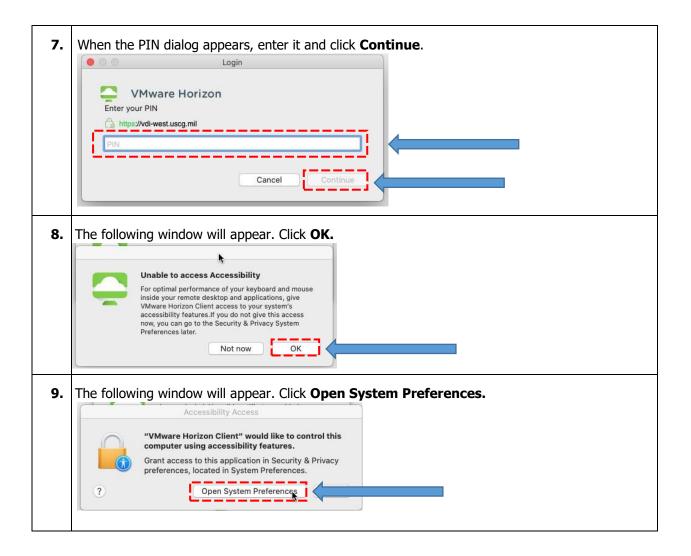


Step

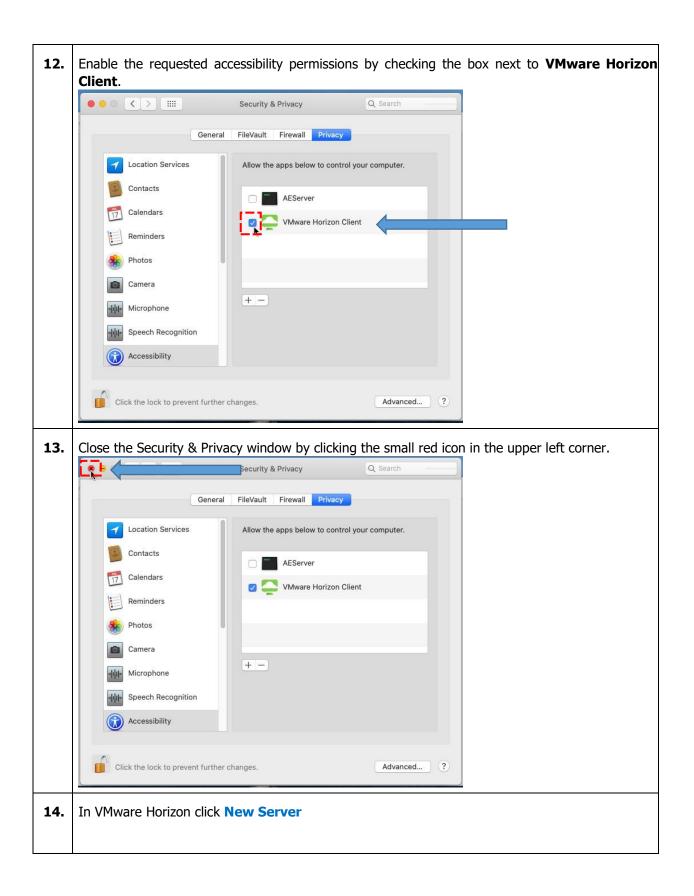
**Connecting to VDI** 



**Connecting to VDI** 



10.	The following window will appear. Click the <b>small lock</b> in the lower left corner.
	Security & Privacy
	General FileVault Firewall Privacy
	Location Services Allow the apps below to control your computer.
	Contacts
	Calendars
	Reminders
	Photos Camera
	Microphone
	Speech Recognition
	Accessibility
	Click the lock to make changes.
11.	The following window will appear. Type in password and click <b>Unlock</b> .
	Image: Security & Privacy     Q. Search
	System Preferences is trying to unlock Security & Privacy preferences. Enter your password to allow this. User Name: vdi-user Password: •••••••• Cont Password: ••••••• Reminders



15.	<ul> <li>The following window will appear. Enter the appropriate Connection Server in the field, using the designated primary listed below:</li> <li>For HQ, D01, D05, D07, D08, and D09, the primary server is VDI-OSC.uscg.mil or VDIEast.uscg.mil.</li> <li>For D11, D13, D14, and D17, the primary server is VDI-West.uscg.mil.</li> <li>Un-check (deselect) Always connect at launch. Click Connect.</li> </ul>
	Unable to access Accessibility       VMware Horizon Client
	Cancel Connect
16.	When the certificate selection window appears, select your PIV certificate, and click <b>Continue</b> .

Step	Connecting to VDI
17.	When the certificate selection window appears, select your PIV certificate.
18.	A list of VDI desktop pools will appear. Double-click the <b>Remote Access</b> pool to launch your Windows VDI session. These pools may have a Windows 10.X naming convention attached.
End	The procedure to Connect to VDI is complete.

### **Appendix A: Troubleshooting**

Here are a few common errors and the most likely resolution.

#### User not recognized

This is most likely due to selecting the wrong certificate. When you choose the certificate to sign in with, select the "PIV" certificate.

#### User not entitled to resources

This means your user account is not set up to access VDI. Contact CSD support to request access.

Desktop resource not available (after selecting the pool to launch)

Either there are no desktops available to log in to, or your specific desktop is rebooting or is not responding. Wait 2 to 3 minutes and try again. If available, try a different desktop pool. If this issue persists for more than 10 minutes, please contact support.

VMware Horizon does not detect smart card (requests "Insert a smart card to log in.")

Occasionally, the CryptoTokenKit driver within macOS detects the smart card removal, but not the re-insertion. Close VMware Horizon, and unplug smart card reader. Then insert smart card into reader, then re-connect smart card reader to computer. Wait 30 seconds for macOS to detect both items, and restart VMware Horizon.

### Appendix B: Update SCR-3500 Driver

Use the following simplified procedures to update the drivers used by macOS for the SCR3100A card reader.

Step	Enable Browser CAC Access - Firefox
1.	Using Safari, open the following link: http://files.identiv.com/products/smart- cardreaders/common-drivers/uTrust_MAC_Driver.zip

2.	The download warning screen likely appears (unless you have already granted download permissions). Click <b>Allow.</b>
3.	Open the extracted directory by clicking the Download icon on the Dock. The uncompressed folder should be visible. Click on the folder icon.
4.	Double click the file <b>scmccid_5_0_38_release_signed.pkg</b> .
5.	A warning message regarding the inability of Apple checking it for malicious software. Click <b>OK.</b>
6.	Grant permission for the file to be opened by clicking <b>Open.</b>
7.	The installer window appears. Click <b>Continue</b> .
8.	The ReadMe is displayed. Review, if desired, then Click <b>Continue.</b>
9.	The Software License Agreement is displayed. Review, then click <b>Continue.</b>
10.	Another software license window appears. Click Agree.
11.	The Installation confirmation window appears. Click Install.
12.	You will be prompted for authorization. Type in your password and click <b>Install Software.</b>
13.	The Installation Summary window is displayed. Click <b>Close.</b>
14.	The Installer will attempt to clean-up (delete) the downloaded files. Click <b>OK</b> .
15.	Another confirmation window will appear. Click <b>Move to Trash.</b>
End	The procedure Update SCR-3500 Driver is complete.



# **End of Document**