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U.S. Air Force PKI
System Program
Office

**Implementation, Training, and Technical Support of the
Department of Defense
Class 3 Public Key Infrastructure (PKI)
For the United States Air Force**

**User Guide for the Air Force
Home Use Middleware
Package**

January 2007

Contents

1. Introduction.....	1
1.1 Purpose.....	1
1.2 Terms of Use.....	1
1.3 Risks.....	1
1.4 Disclaimer of Liability	1
2. Middleware and Reader Installation Instructions	2
2.1 Required Items	2
2.2 Middleware Installation Instructions	2
2.3 Smart Card Reader Installation Instructions	11
2.4 Smart Card Reader Information.....	11
2.5 Additional Information About Smart Card Readers	13
2.6 Verify Installation Success	14
3. Uninstall Instructions.....	15
3.1 Uninstall Home Use Middleware	15
3.2 Removal of DoD Root Certificates.....	20
4. Technical Support.....	25

1. Introduction

1.1 Purpose

This document provides instructions on how to install and uninstall the *Home Use Middleware* (ActivCard Gold 3.0, AF version) and information regarding smart card readers and technical support.

Read all installation instructions prior to installing the Home Use Middleware and a smart card reader and drivers.

1.2 Terms of Use

The *Home Use Middleware* you are about to install is the property of the United States Air Force (USAF) and is provided for your use on a personal, non-government furnished computer. This product is distributed under licenses restricting its use, duplication, and distribution. It is intended For Official Use Only (FOUO), for accessing Department of Defense (DoD) and USAF Web sites, systems, and networks with the Common Access Card (CAC).

Distribution to non-AF employees is not authorized.

By installing and using this *Home Use Middleware*, you signify your agreement to the terms and conditions as set forth. If you do not agree to this Agreement, do not install or use this product.

1.3 Risks

There are potential risks associated with installing this package. It is not possible to test this middleware with all software, games, and/or applications that are commercially available and that may be on your home computer. Therefore, it is possible that the *Home Use Middleware* could conflict with other applications or software residing on your home computer.

1.4 Disclaimer of Liability

With respect to installing and using *Home Use Middleware*, neither the DoD nor USAF, nor any units or employees within, provide any warranty, expressed or implied, or assume any legal or financial liability or responsibility for your non-government computer system and/or damages or repairs that may result from system incompatibilities with *Home Use Middleware*.

2. Middleware and Reader Installation Instructions

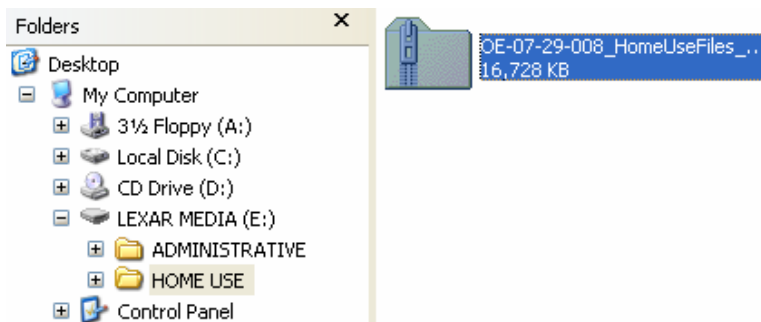
2.1 Required Items

- CAC
- Smart Card Reader (Refer to Table 2-1 for a list of known usable smart card readers)
- System requirements: Windows XP (Professional or Home) with Service Pack 1 or higher, or Windows 2000 with Service Pack 2 or higher; Internet Explorer (Version 6 only); and 27 MB of free disk space. This package will check to see if your computer meets these requirements.
- Hardware requirements: If your computer is running the required operating system (Windows XP or Windows 2000) then your computer has the required hardware.

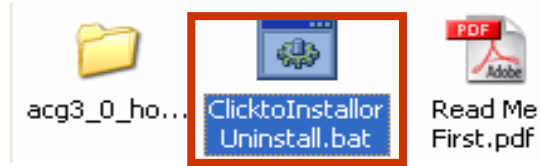
2.2 Middleware Installation Instructions

Important: Before installation, deactivate your virus scanning software and anti-spyware! You should disconnect your computer from the Internet prior to deactivating your virus scanning software.

- 1) If using Windows XP, double click the zip file (pictured here) to open it. *(If using Windows 2000, you will need an unzip tool. You can find numerous free evaluation versions of unzip utilities on the Internet, which come with instructions. You can also consult your local Client Support Administrator (CSA) for assistance. Using an unzip utility in Windows 2000, you will need to unzip the file into a folder of your choice then proceed to Step 10 of the Middleware Installation Instructions).*



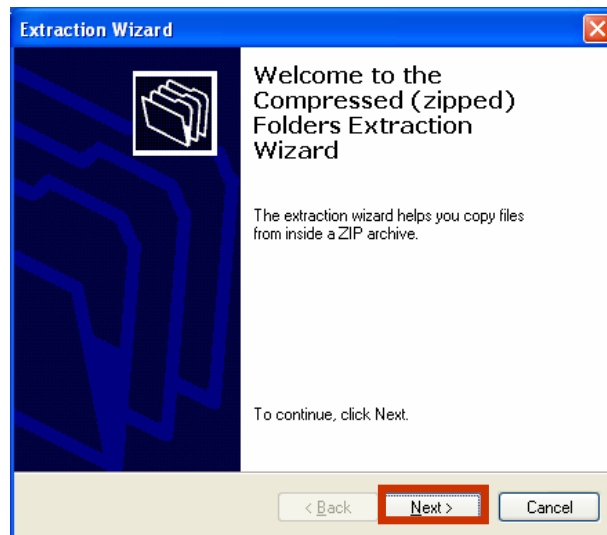
- 2) After double-clicking the zip file, you will notice a folder and two files. One of the files is a batch file used to install or uninstall the middleware. Double click the batch file (pictured here) to begin installing the *Home Use Middleware*.



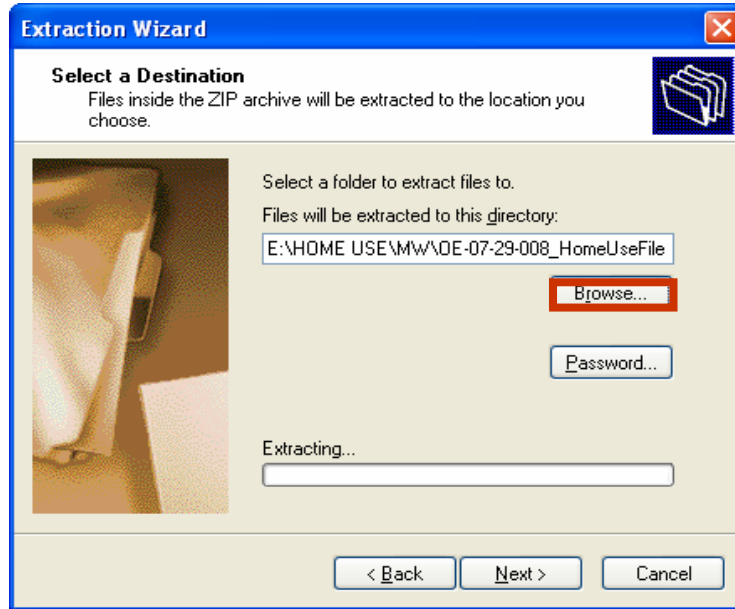
- 3) Next, click *Extract all*.



- 4) Click *Next*.



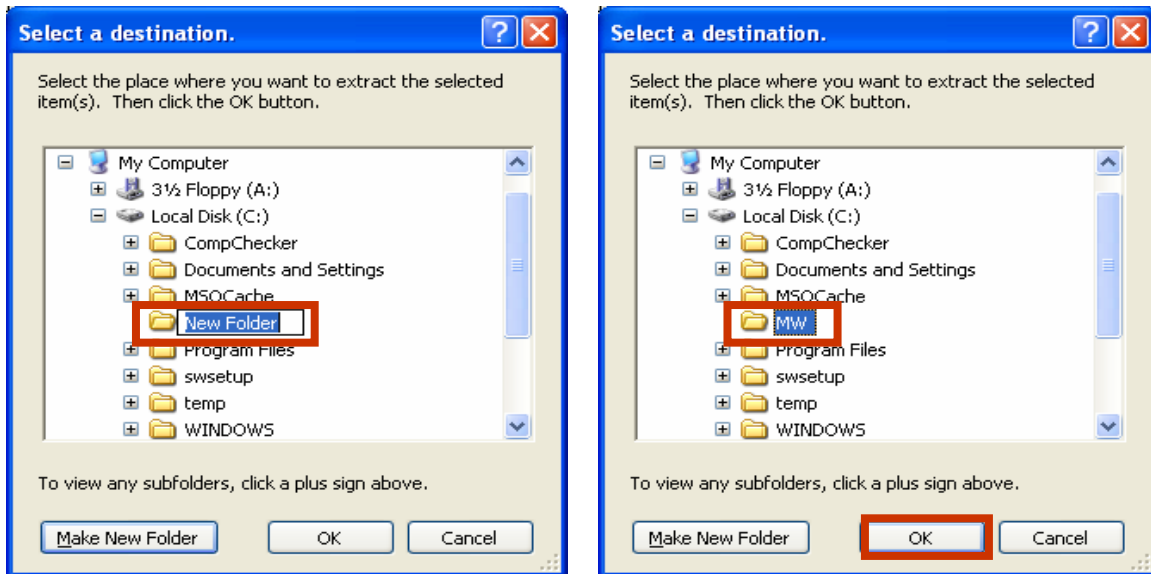
- 5) It is suggested that you create a destination for the files to be extracted. With the next prompt, click **Browse**.



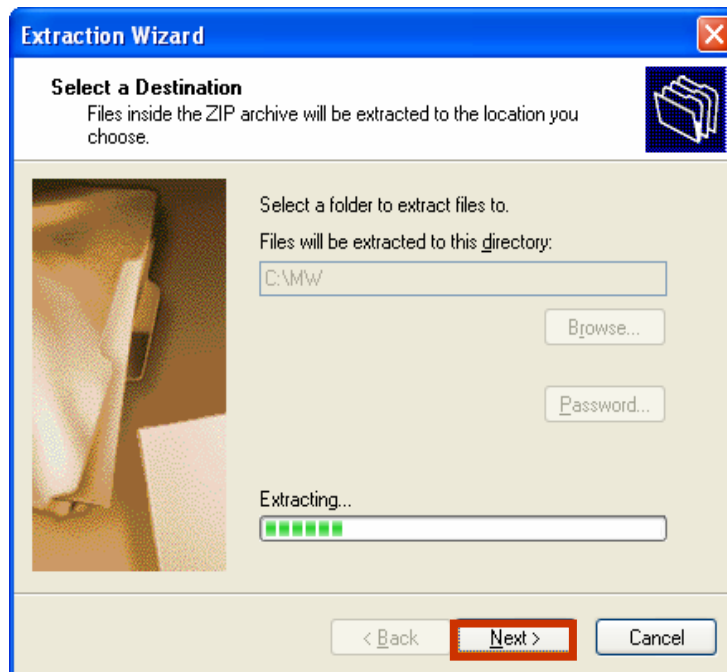
- 6) As a suggestion, you may just want to create a folder on the hard drive (or a drive of your choice). In the next few screenshots, a folder is being created with the name "MW." Click on the drive where you want to create the folder (in this case, Local Disk (C:)) Once the drive is highlighted, click **Make New Folder**.



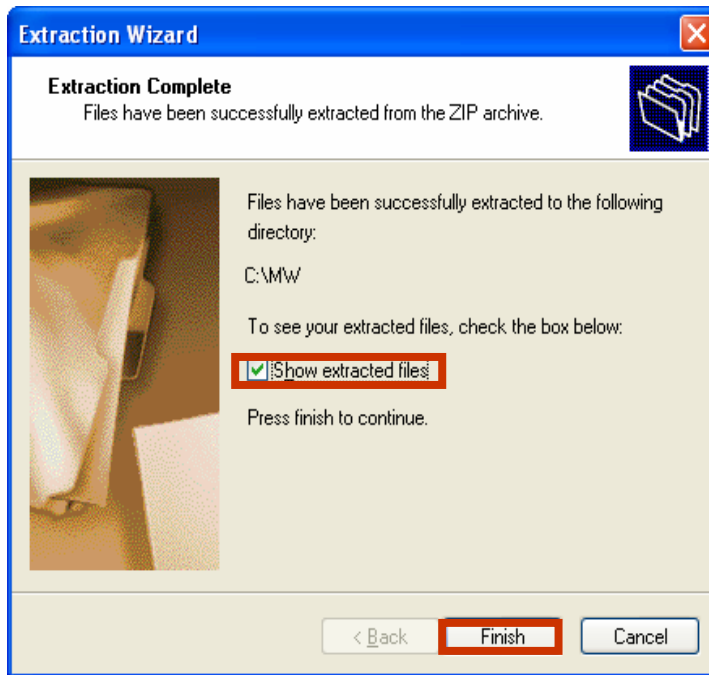
- 7) A new folder will appear, named *New Folder*; change the name to something you can easily recall for the middleware files (in this case, “*MW*” is used). Once you have named the folder, click *OK*.



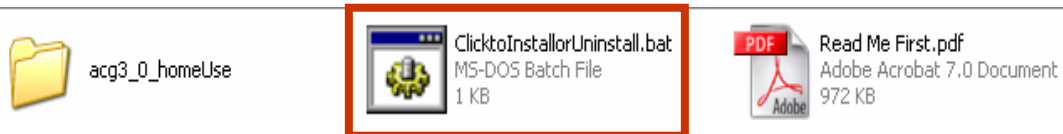
- 8) At the next prompt, click *Next* to start the file extraction.



- 9) Once the extraction is complete, ensure a checkmark is in the box for **Show extracted files**, and click **Finish** to see the extracted files and to continue install.

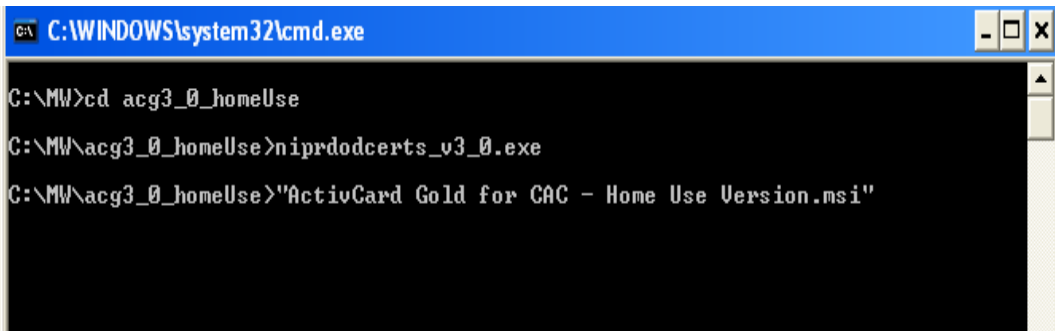


- 10) You will notice a subfolder and two files. One of the files is a batch file used to install or uninstall the middleware. Double click the batch file (pictured here) to install the *Home Use Middleware*. Installation will include the middleware and DoD and External Certification Authority (ECA) Root certificates.



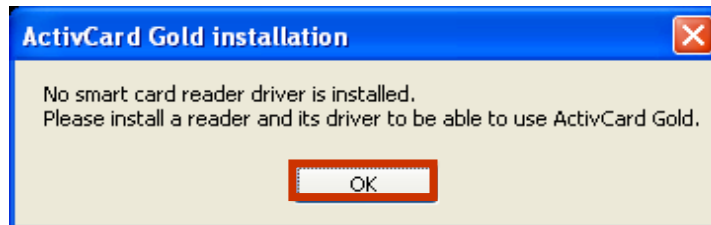
Note: If you receive a pop-up from your virus scanning software, select the appropriate option to permit installation.

- 11) A black DOS window will appear, indicating install activity. It should automatically disappear during the computer reboot that will follow the middleware installation.

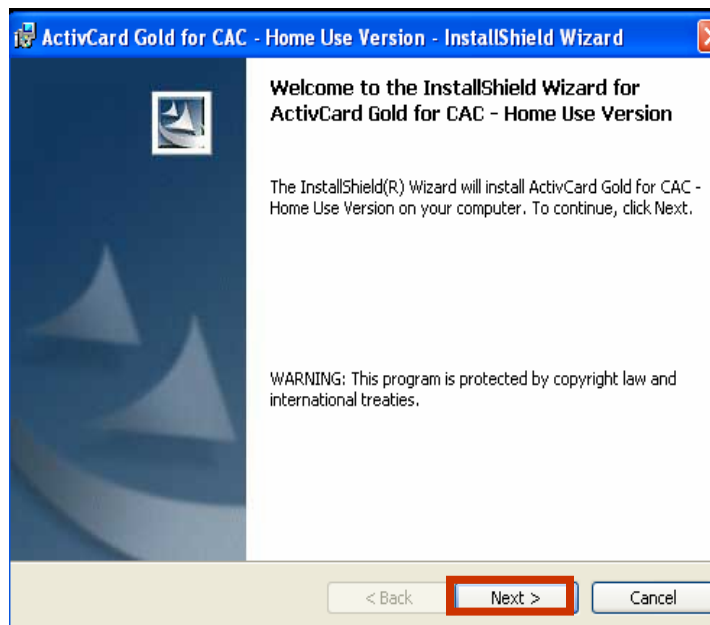


```
C:\WINDOWS\system32\cmd.exe
C:\MW>cd acg3_0_homeUse
C:\MW\acg3_0_homeUse>niprdodcerts_v3_0.exe
C:\MW\acg3_0_homeUse>"ActivCard Gold for CAC - Home Use Version.msi"
```

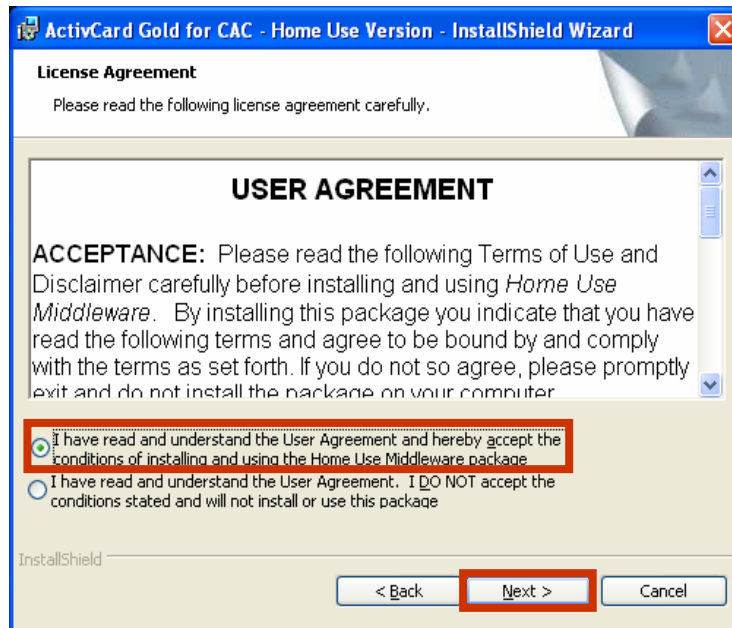
- 12) You may receive the following prompt if you have not yet installed a smart card reader. If you do, click **OK** and continue installing the middleware.



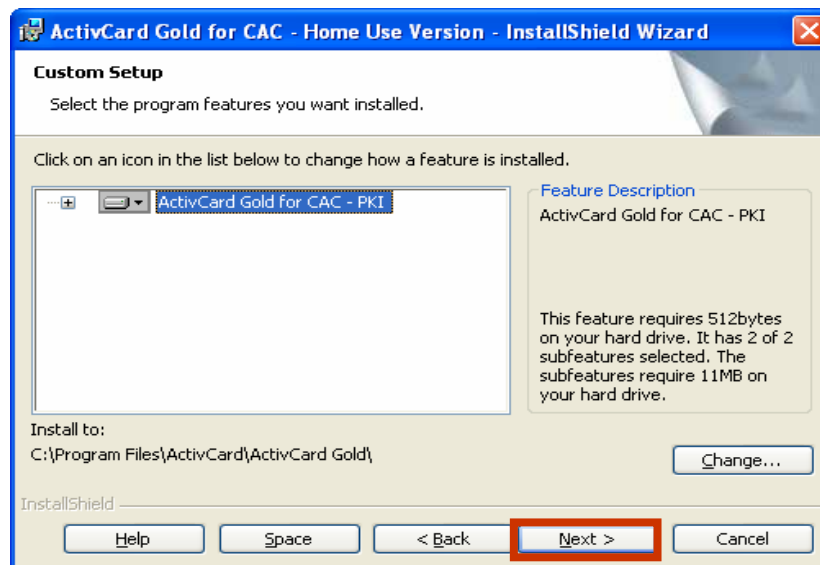
- 13) Click **Next** at the ActivCard Gold for CAC – Home Use Version - InstallShield Wizard.



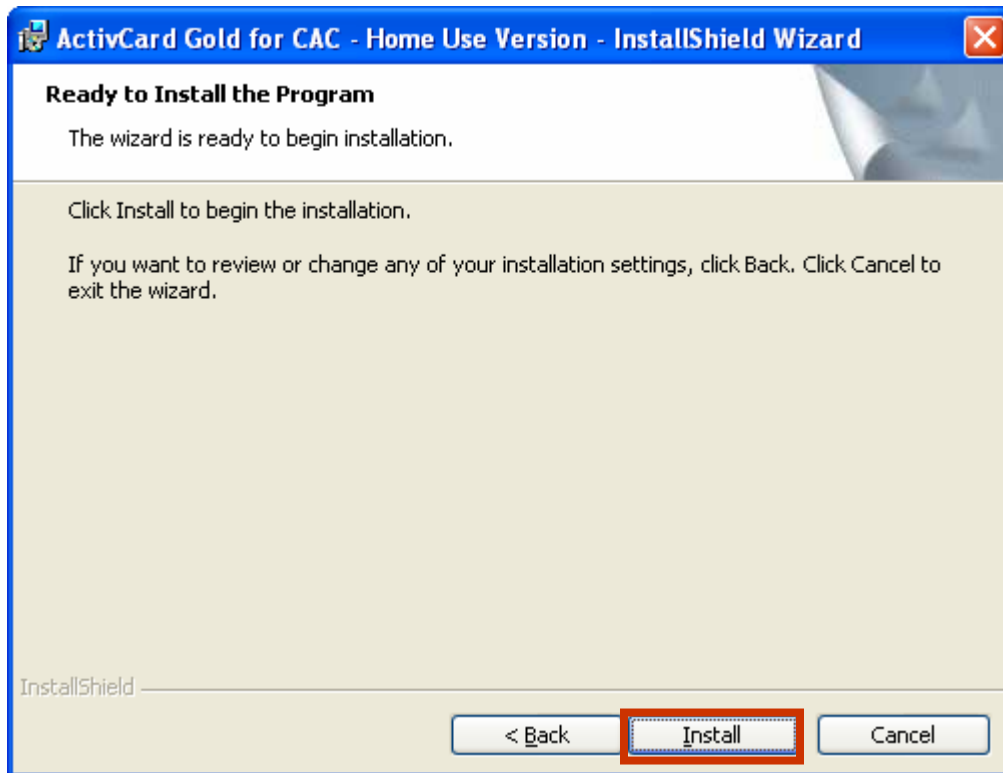
14) Read and acknowledge the *User Agreement*. Click *Next*.



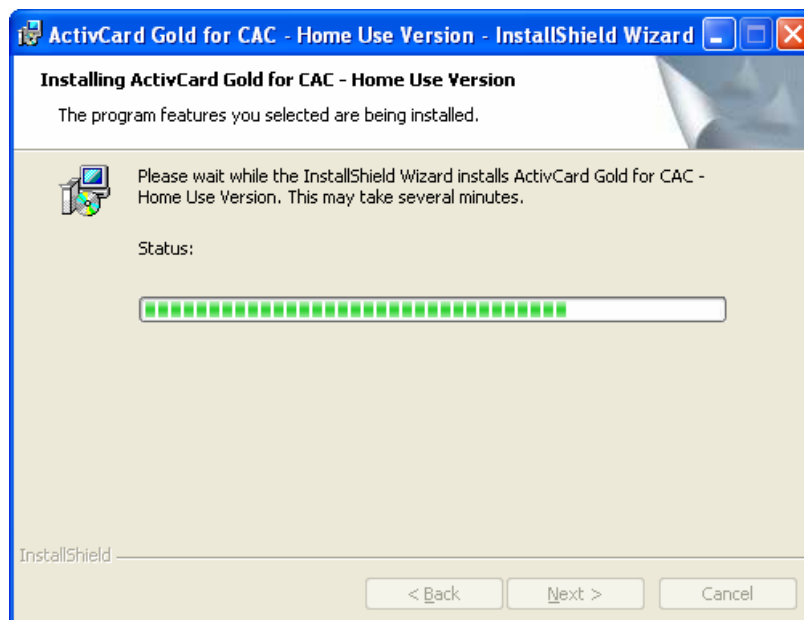
15) The InstallShield Wizard will display ActivCard Gold for CAC – PKI selected for installation. Click *Next*.



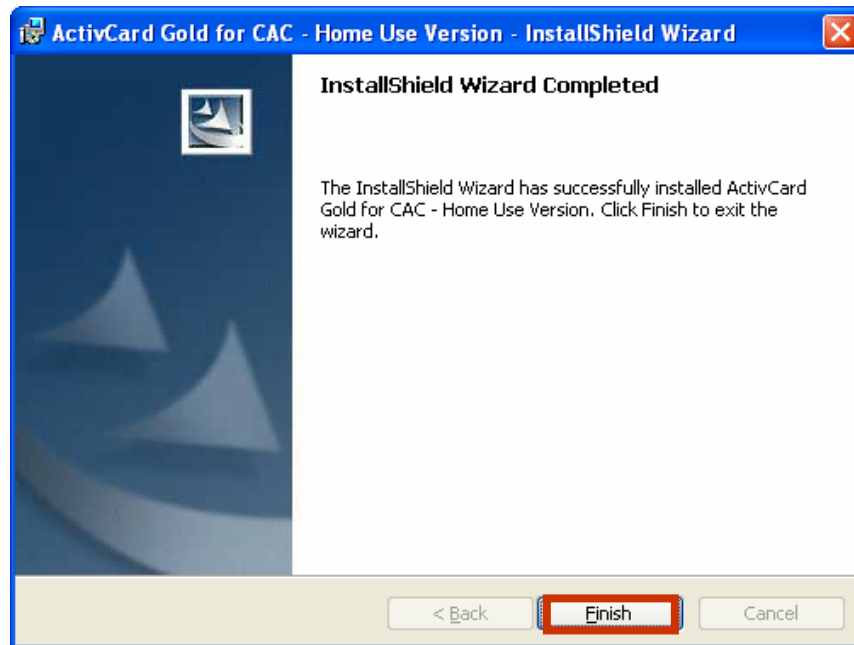
16) Click **Install**.



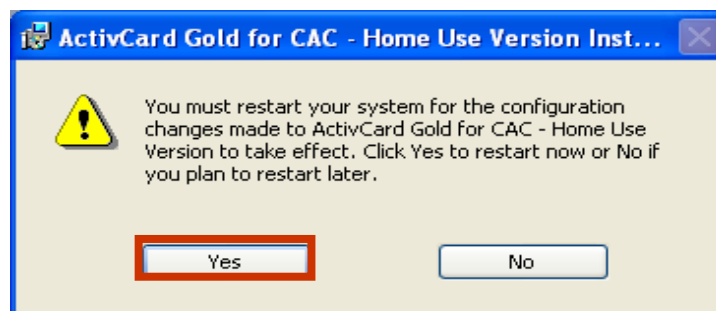
17) A status window will show the progress of installation.



18) When the installation is complete click **Finish**.



19) Click **Yes** when prompted to restart your computer to complete the middleware installation.



2.3 Smart Card Reader Installation Instructions

Once the computer has rebooted from the middleware installation, ***it is best to shut down the computer before you install a smart card reader*** . With the computer turned off, plug in the smart card reader and then start the computer.

If the computer automatically detects and installs the smart card reader drivers, no further action is necessary. Smart card reader drivers already exist on many computers. However, the computer may seek smart card reader drivers via the Internet and provide prompts to install them when found.

If the computer did not detect and install the smart card reader, accomplish the installation using instructions and smart card reader drivers that should have come with the smart card reader when purchased. If you do not have instructions (or smart card reader drivers), you may be able to obtain them from the smart card reader vendor's Web site or via an Internet search. If you obtained the card reader from a military source, and do not have installation instructions or drivers, consult your Client Support Administrator (CSA).

Reboot your computer after installing the smart card reader drivers.

2.4 Smart Card Reader Information

Table 2-1 is a compatibility matrix of middleware (ActivCard Gold 3.0) with various common smart card readers. It also contains links to Web sites that provide additional information. There are many sources from which to purchase smart card readers (local and online retailers, and online auctions).

Table 2-1. Smart Card Readers

			Desktop		Laptop	
Smart Card Reader	Vendor Web Site Links	Reader Type	WIN 2000 Pro	WIN XP Pro	WIN 2000 Pro	WIN XP Pro
			Schlumberger Reflex 20 PCMCIA	www.readers.slb.com	PCMCIA	✗
Schlumberger Reflex USB	www.readers.slb.com	USB	✓	✓	✓	✓
SCM SCR 201 PCMCIA	http://www.scmmicro.com/security/secure_card.html	PCMCIA	✓	✓	✓	✓
SCM SCR 331 USB	http://www.scmmicro.com/security/secure_card.html	USB	✓	✓	✓	✓
SCM SCR111 Serial	http://www.scmmicro.com/security/secure_card.html	Serial	✓	✓	✓	✓
SCM SCR301 USB	http://www.scmmicro.com/security/secure_card.html	USB	✓	✓	✓	✓
GoldTouch Keyboard USB	http://www.keyovation.com/	USB	✓	✗	✓	✓
Infinier LT4000 PCMCIA	http://www.mako-tech.com/pands/reader_sol.cfm	PCMCIA	✗	✗	✓	✓
Dell D600 Laptop with O2Micro	www.dell.com	PCMCIA	✗	✗	✓	✓
ActivCard Serial Reader	http://www.actividentity.com/en/products/4_3_2_readers.php	Serial	✓	✓	✓	✓

✓	Tested OK
✗	Failed

2.5 Additional Information About Smart Card Readers

USB smart card readers are the preferred smart card readers for both Windows 2000 and Windows XP workstations.

PCMCIA smart card readers work on most Windows 2000 and Windows XP laptops; however, many laptops have only one PCMCIA slot, often already used for other purposes such as a wireless local area network (LAN) card. A USB smart card reader is often a better choice even for laptops.

Serial smart card readers operate on Windows 2000 and Windows XP workstations. For the middleware to function properly, the serial smart card readers need to be installed on a COM port. While serial smart card readers can function on most new equipment, they are typically powered by tapping into the keyboard cable connector.

Most smart card readers will function properly with ActivCard Gold Version 3.0.

The following list reflects companies/vendors that sell smart card readers; this list is not all-inclusive. The AF does not recommend one over another.

- SCM SCR (USB and PCMCIA) smart card readers:

Envoy Data Corp.
www.smart-cardsys.com

Tx Systems
www.txsystems.com

Secure HQ
www.securehq.com

CDW
www.cdw.com

- Cherry (USB) smart card readers:

Newark 1N One or GTSI
www.newark.com

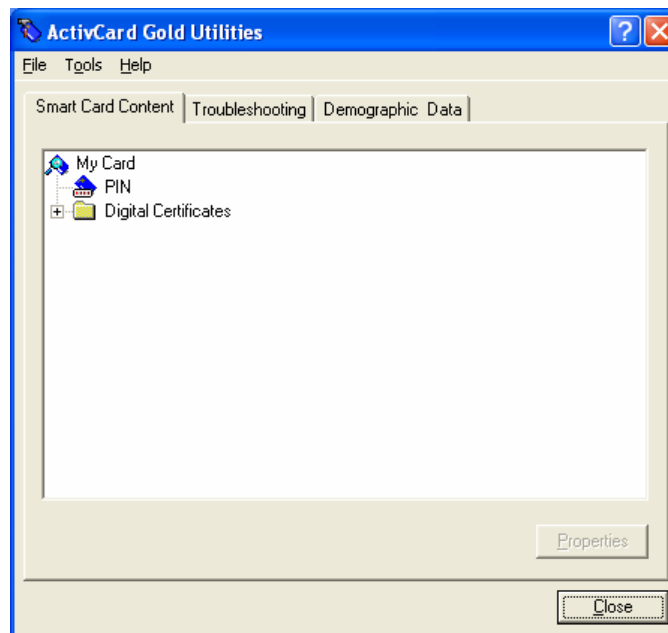
CDW
www.cdw.com

2.6 Verify Installation Success

After your computer has rebooted, insert your CAC into the smart card reader. Double click the **ActivCard Gold** icon located in the system tray (lower right-hand corner of the desktop).



The following window indicates you successfully accessed your CAC.



3. Uninstall Instructions

3.1 Uninstall Home Use Middleware

The following instructions explain how to uninstall the *Home Use Middleware* from your computer. There are two options to uninstall the middleware. The first option is to use *Add/Remove Programs* on the *Control Panel*.

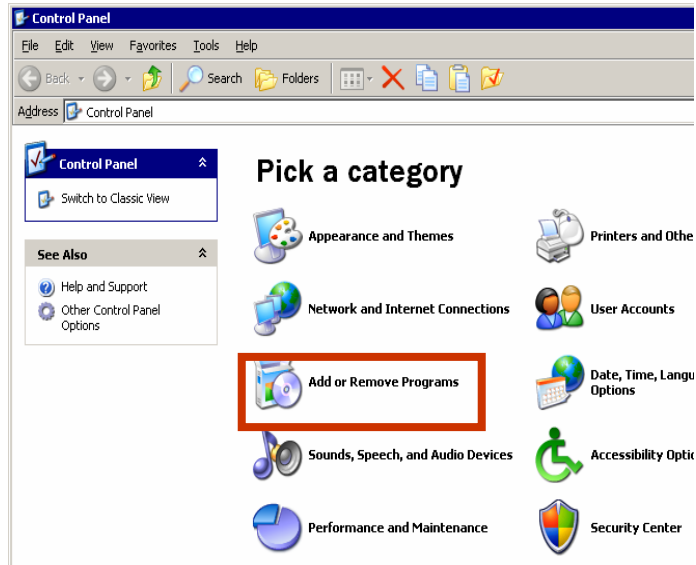
- 1) Click the *Start* button. (Note: If you are using Windows 2000 or the classic view, you will need to click on *Settings* after clicking the *Start* button.)



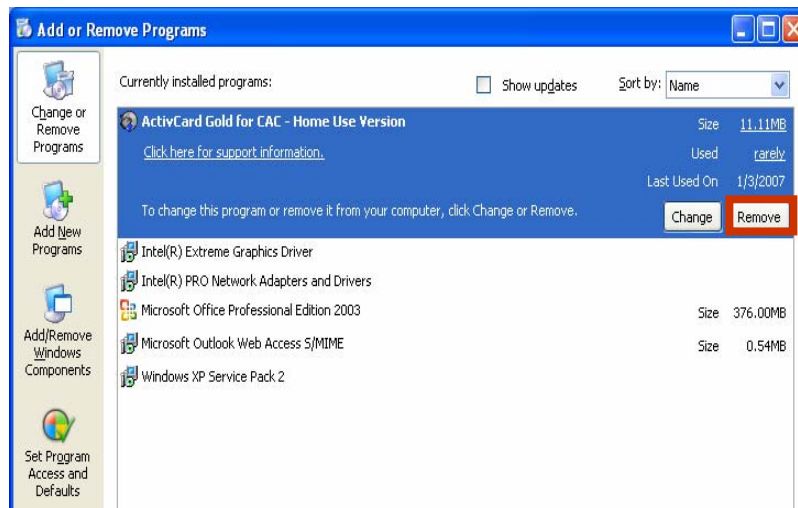
- 2) Click *Control Panel* from the menu.



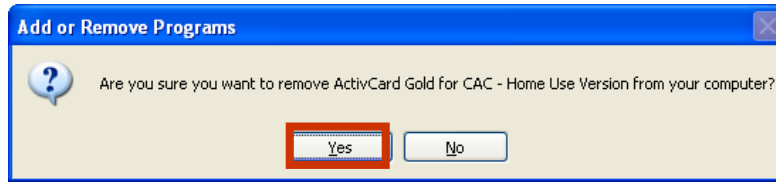
3) Click **Add or Remove Programs**.



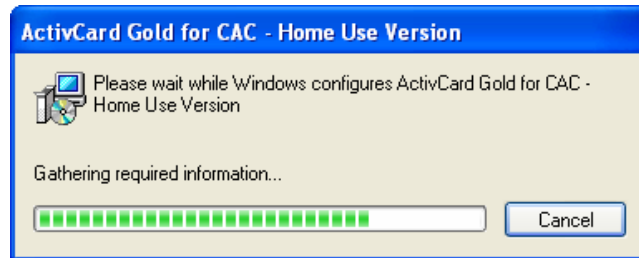
4) Select **Remove a Program**, or **Add or Remove Programs**. When the list depicting the programs installed on your computer appears, highlight the **ActivCard Gold for CAC - Home Use Version** program, and click **Remove**.



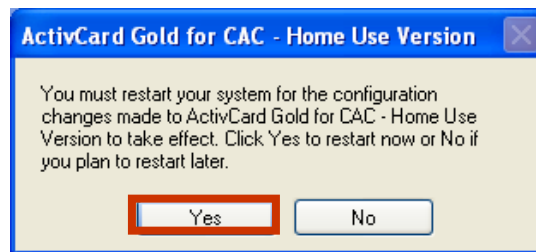
- 5) Click *Yes* to remove the program.



- 6) Windows will then provide a progress indicator, reflecting that the middleware is being uninstalled.

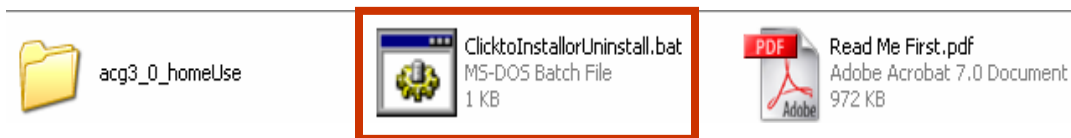


- 7) Reboot your computer when prompted; click *Yes* at the following prompt.

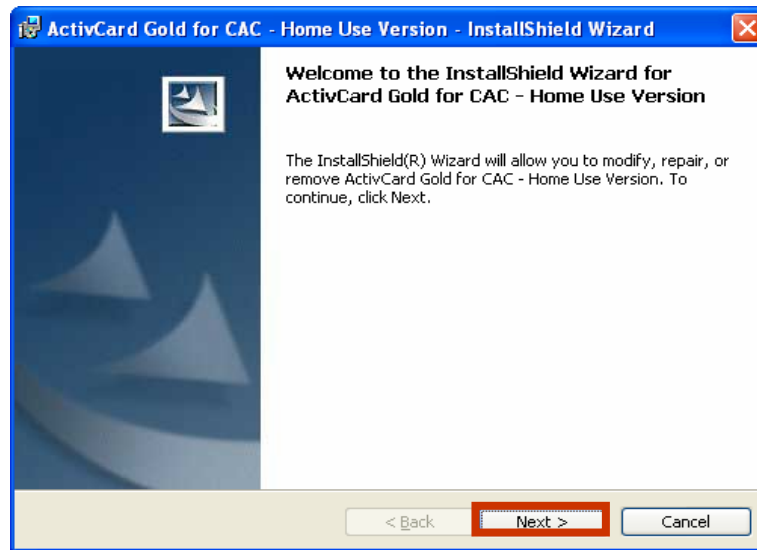


Rather than use the *Add/Remove Programs* on the *Control Panel*, you can go to the folder where the middleware files are located...in this case, C:/MW was the folder created during the unzip file extraction.

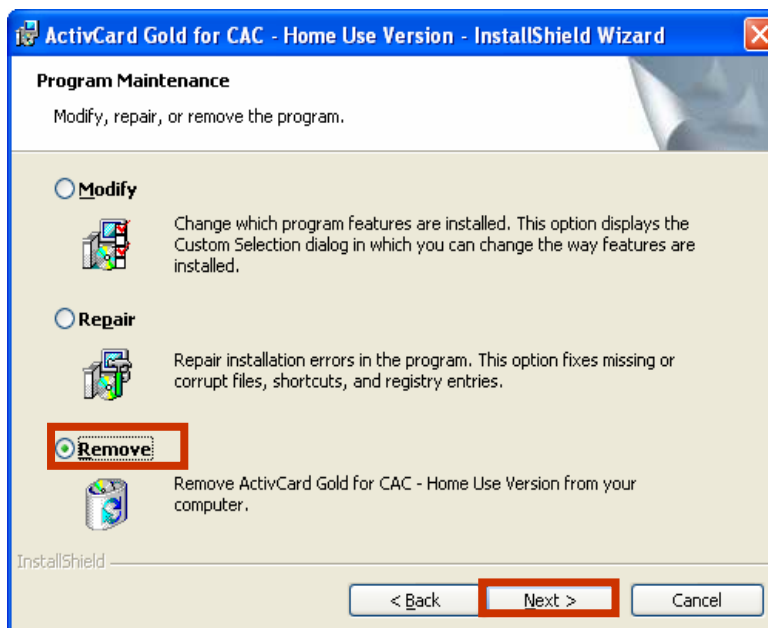
- 8) Double click the batch file (pictured here) to uninstall the *Home Use Middleware*.



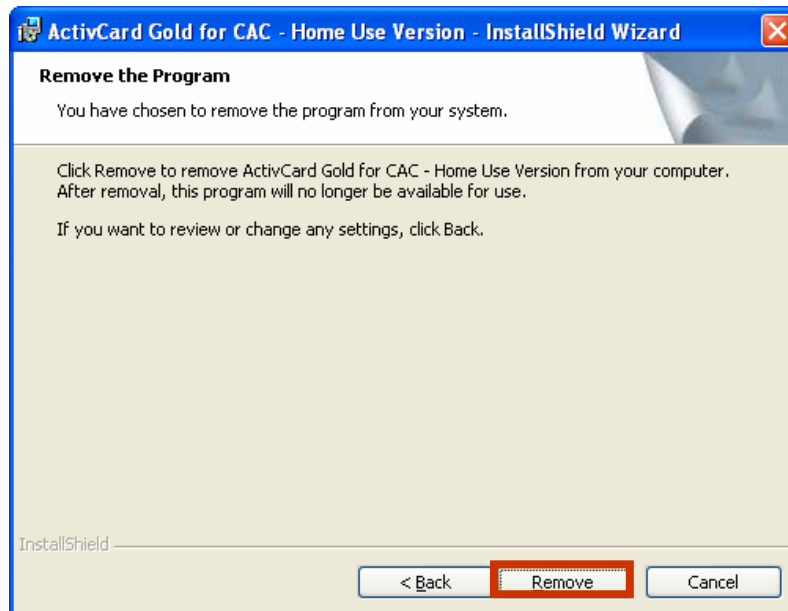
9) Click *Next* when the InstallShield Wizard prompt appears.



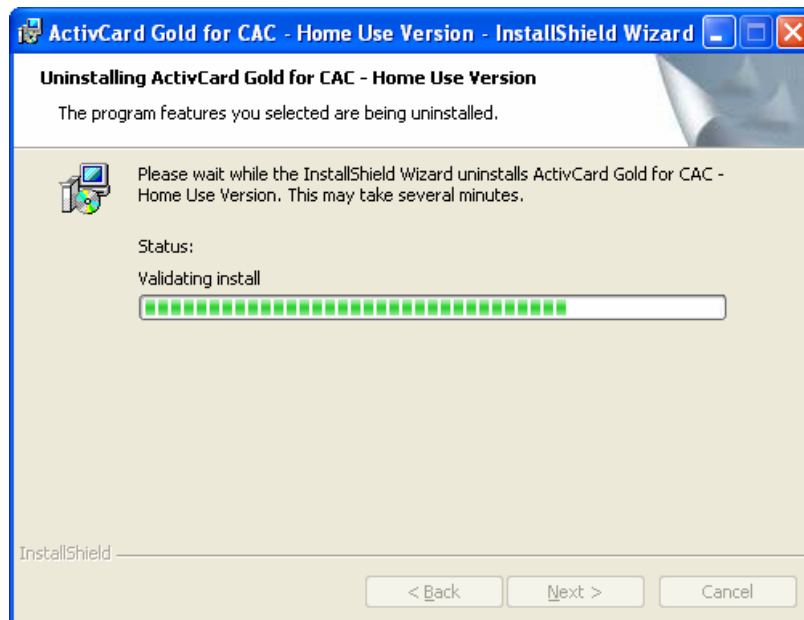
10) Select *Remove* and click *Next*.



11) Click **Remove**.



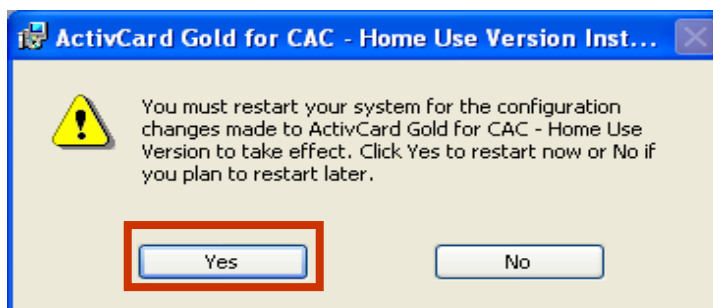
12) You will notice an uninstall indicator.



13) Once the uninstall is complete, you will receive a **Finish** prompt. Click **Finish**.



14) You will then receive a prompt to restart your computer, to complete the uninstall. Click **Yes**.

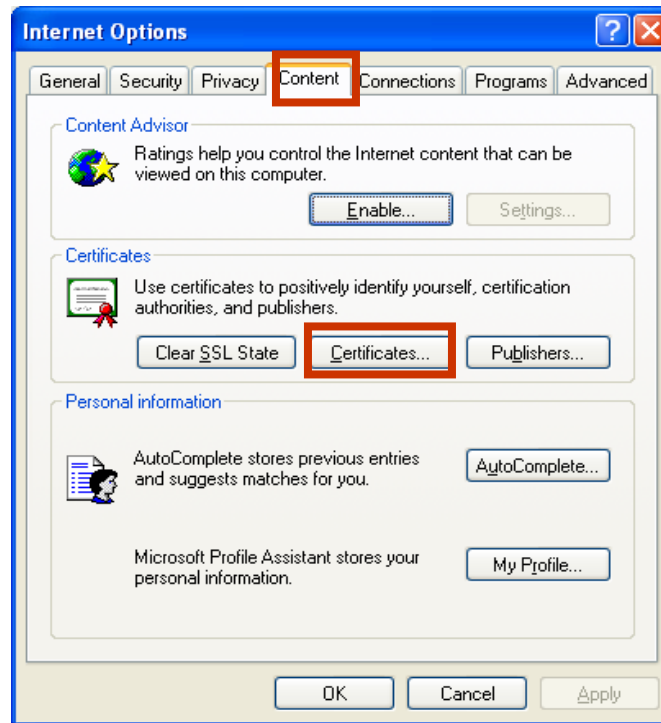


3.2 Removal of DoD Root Certificates

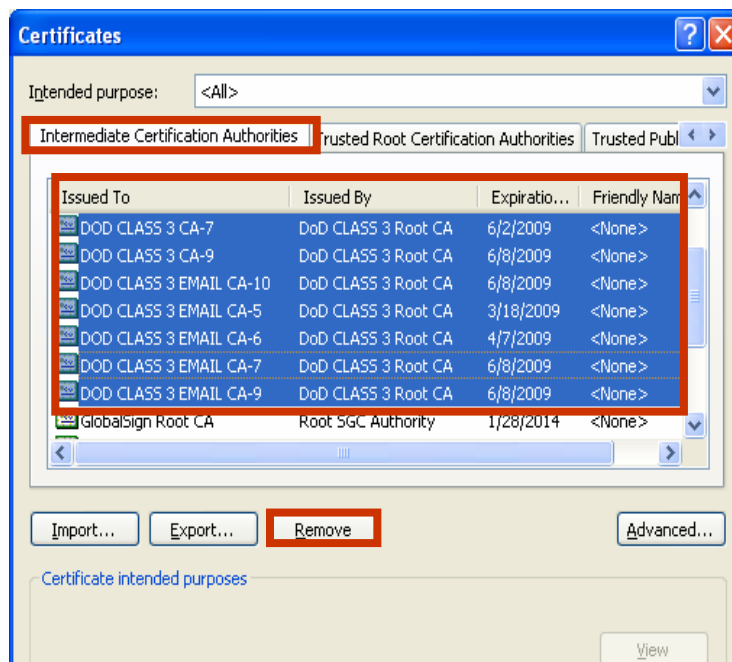
During installation, *Home Use Middleware* also installed DoD root certificates on your computer. These certificates are necessary to use the PKI. However, when you uninstall *Home Use Middleware*, the DoD root certificates remain. Leaving these certificates on the computer does not cause any problems; however, to remove them, follow these instructions.

- 1) Open Internet Explorer.
- 2) Open **Tools**, and then click **Internet Options**.

- 3) Select the *Content* tab, click on the *Certificates* button.



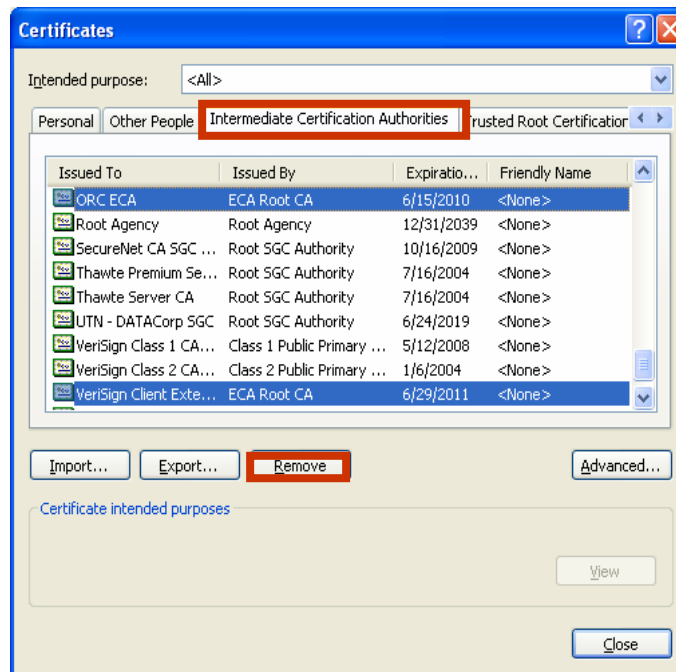
- 4) This area is the “Certificate Store” and contains several types of certificates used with your computer and its applications/programs. There are several tabs at the top of the certificate store. Select the *Intermediate Certification Authorities* tab. Highlight the certificates that start with “DOD” and click the *Remove* button.



- 5) When you click **Remove**, you will see the following prompt, click **Yes**.



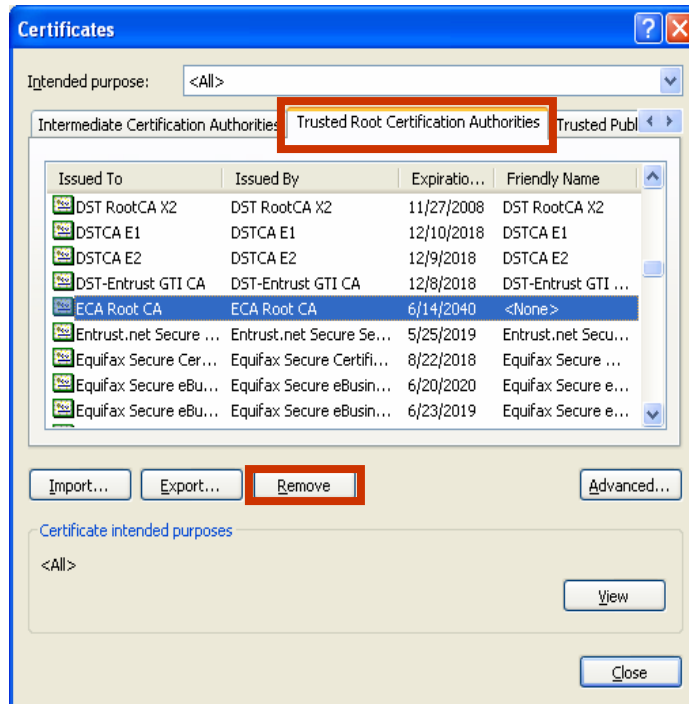
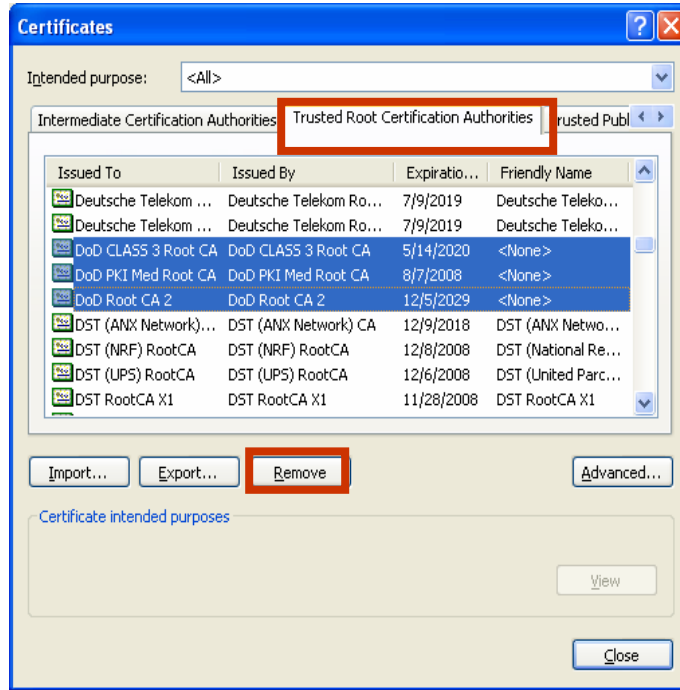
- 6) Next, select the two ECA Root CA certificates. Scroll down to the two certificates (**ORC ECA** and **VeriSign Client External Certification Authority**), highlight them, and click the **Remove** button. **DO NOT SELECT OR REMOVE ANY OTHER CERTIFICATES** on this tab.



- 7) Click **Yes** at the following prompt.



- 8) Next, select the **Trusted Root Certification Authorities** tab. Scroll down to the **DoD Class Root CA**, the **DoD PKI Med Root CA** the **DoD Root CA 2** and **ECA Root CA** certificates. Highlight these certificates only. **DO NOT SELECT OR REMOVE ANY OTHER CERTIFICATES.** Click the **Remove** button.



9) When you click **Remove**, you will see the following prompt, click **Yes**.



10) You have successfully removed the DoD root certificates. Click **Close**.

4. Technical Support

If you experience difficulty with installing *Home Use Middleware* or a smart card reader, please contact your local Client Support Administrator (CSA), or contact your local Help Desk at the servicing Communications Squadron.