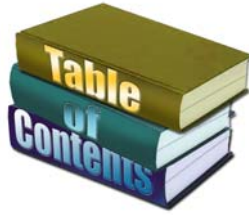# 2-334 BN (BCT) - United States Army's Common Access Card (CAC) Instructional Units

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IT 500: Principles of Instructional Technology
Initial Design Project
December 10, 2008

Let's Get Started

While trying to install your CAC Reader and configure the software on your home PC or laptop using the Common Access Card (CAC) Resource Center on AKO have you ever felt that too much time was wasted on jumping around from site-to-site gathering all of the required pieces?

After gathering all of the required pieces of software have you felt confused and lost in a cumbersome process that seems to always lead to some sort of installation failure or error only you experience?

Have you ever felt overwhelmed, pressed for time and just want your CAC to work from home, so you can get plugged in quicker and meet the needs of the Soldiers you represent?

Have you ever wondered why it is important to have a CAC Reader installed on your home PC, laptop or handheld device?

If you answered yes, to any of these questions than this instructional guide is designed just for you!

Understanding how to properly install the software for your CAC Reader and to be able to digitally sign forms is a very important part of being a technologically proficient Soldier in 21st Century.

Being able to manipulate the various features of the CAC software and being able to fully understand and put the CAC to use is a critical step in decreasing administrative workload while increasing your operational as well as information efficiency and security. Most of the benefits of the CAC are put to use through the combined application and integration with AKO, My Forms and other Military applications and websites.

These instructional units are packed with useful, easy-to-understand information and clear step-by-step instructions.

Before You Begin

Below you will find key concepts and terms that will lay the foundation for later instruction over how to use certain management features of the software as well as AKO and My Forms.

Concepts Terms and Definitions:

Army Knowledge Online (AKO): is the largest and most mature of all Department of Defense (DoD) portals; it offers many features and capabilities not available on other portals across DoD and has been identified as the best of breed portal in DoD. Using a Service-Oriented Architecture (SOA) with AKO as the base, Defense Knowledge Online (DKO) will be established as the DoD Enterprise portal; the single entry point that empowers knowledge dominance, ensures synchronization of resources, and aggressively enables situational awareness and operational security throughout the DoD community, including critical mission partners. Future DKO will consist of a personalized, user-defined, web-based presentation that allows for secure access to Enterprise services, applications and content.

Common Access Card (CAC): is a United States Department of Defense (DoD) smartcard issued as standard identification for active duty military personnel, reserve personnel, civilian employees, and eligible contractor personnel.
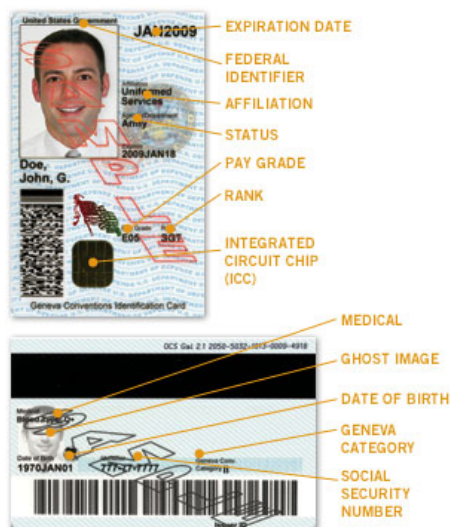
Common Access Card (CAC) Reader: is an electronic device that reads smart cards. Some keyboards have a built-in card reader. There are external devices and internal drive bay card reader devices for PC. Some laptops have built-in smart card reader.


CAC Middleware (ActivClient) Software: enables usage of PKI certificates and keys on a CAC to secure desktop applications, network login, remote access, web login, e-mail and electronic transactions.

Basically, it is the software that communicates between your CAC Reader your computers operating system.

Department of Defense Security Certificates: DoD Root Certificates allow your Web browser to trust the identity of Web sites, such as Defense Technical Information Center (DTIC), whose secure communications are authenticated by DoD.
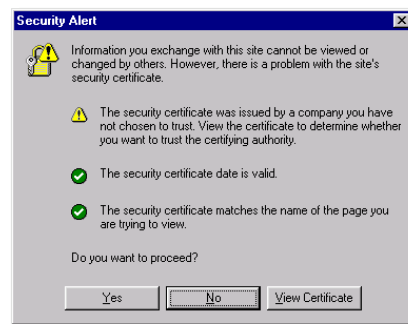
Basically, the certificates help you avoid the Security Alert windows or pop-ups when you go to secure communication Web sites for various DoD agencies, including DTIC.

Personal Identification Number (PIN): is a secret numeric password shared between a user and a system that can be used to authenticate the user to the system.
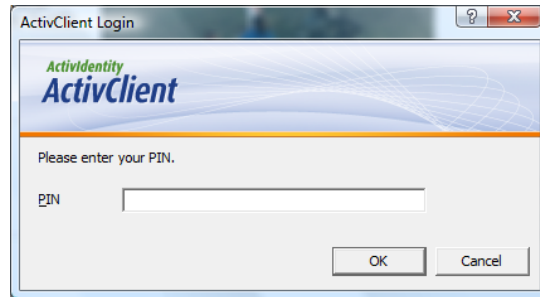
PureEdge Viewer: allows users to view, fill, digitally sign, save, submit, and print e-forms.

Silanis ApproveIt Software: enables users to verify and add their electronic signature, approve and securely print documents, forms, letters and spreadsheets.

Universal Plug and Play (UPnP): allow devices to connect seamlessly and to simplify the implementation of networks in the home (data sharing, communications, and entertainment) and in corporate environments for simplified installation of computer components. The term UPnP is derived from plug-and-play, a technology for dynamically attaching devices directly to a computer.
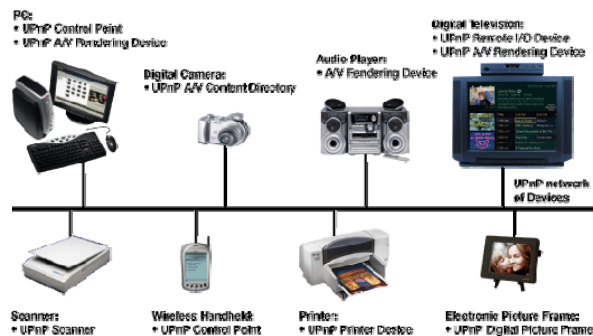
Web Browser: is a software application which enables a user to display and interact with text, images, videos, music, games and other information typically located on a Web page at a website on the World Wide Web or a local area network.

WinZip Software: WinZip is a Windows data utility program that lets you archive and compress files so that you can store or distribute them more efficiently.

Uninstall Previously Installed Software

In this first section of instruction, you will learn how to properly uninstall all previously installed software such as Middleware (ActivClient), Silanis ApproveIt, and PureEdge Viewer from your home PC or laptop.

Uninstalling these programs will ensure that you are starting this instructional unit with a clean slate and will ensure that your CAC is being properly installed in the correct order in order to avoid any potential conflicts!

Steps to all Uninstall Previous Software Installations such as Middleware (ActivClient), Silanis ApproveIt, and PureEdge Viewer from your home PC or laptop
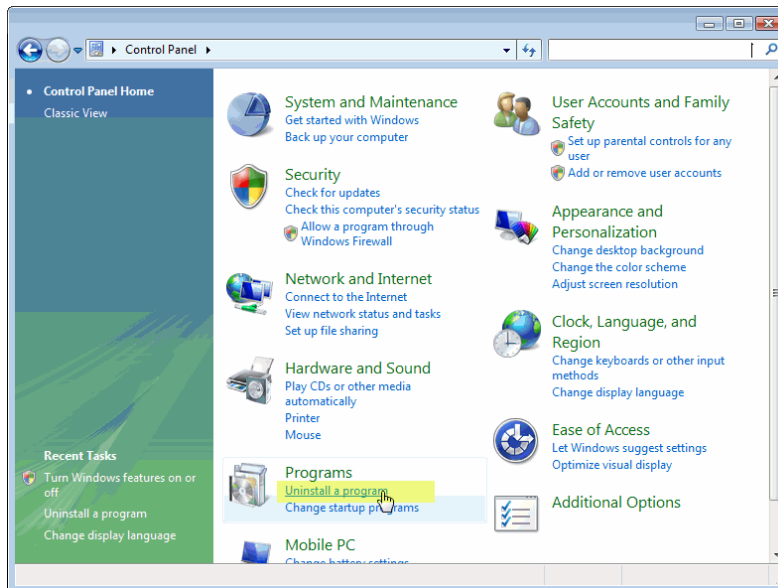
Step 1:
Open PC or laptop
Windows Control Panel
 	
Accessing the Vista Control Panel:
 	
1. **Left Click Windows Start Button**
 	
1. **Left Click Control Panel**
 	
2. **Wait for Control Panel to Open**
 	
3. **Under Programs Section**
   Left Click Uninstall a Program
 	
4. **Wait for Programs and Features**
   Menu to load in Step 2
 	
5. **Continue with Step 2**
	Open Windows Control Panel
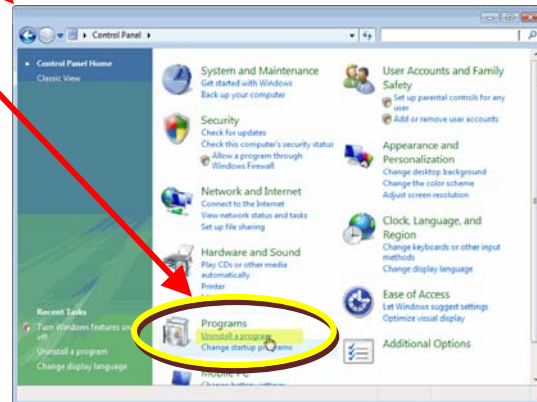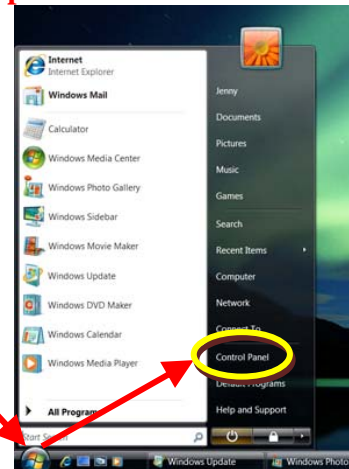
Step 2: Uninstall Previous Software Installations	**Step-by-Step Uninstall Instructions** Click here for step-by-step instructions to Uninstall Previous Software Installations with screenshots!
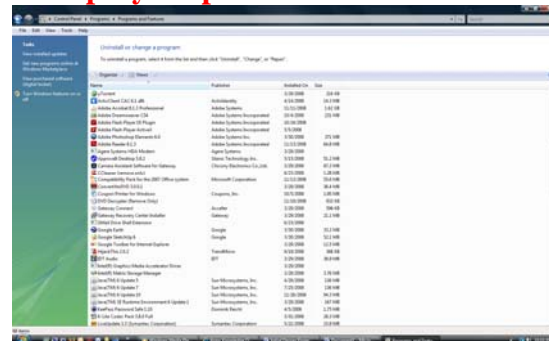
Installation of CAC Reader

In Section II, you will learn how to properly install your CAC Reader on your home PC or laptop. A CAC Reader is the electronic device that reads smart cards, which you learned about in the Concepts Terms and Definitions section.

Important Note:
Most newly purchased CAC Readers are plug and play, which does not require you to manually install a driver!

Steps to install a Universal Plug and Play (UPnP) CAC Reader on your home PC or laptop

Step 1: Shut Down Home PC or laptop 	**Shutdown Home PC or laptop** **Shutdown Shortcut:** **Push Windows Keyboard Button, Right Arrow 3 Times and then Enter Key!**
Step 2: Connect your Universal Plug and Play (UPnP) CAC Reader to your Home PC or laptop **Important Note:** If your CAC Reader is not Universal Plug and Play (UPnP) you may need to manually install a driver for it to operate properly.	**PC USB Port** **Laptop USB Port** Click here for additional instructions for Non-plug and play CAC Readers!

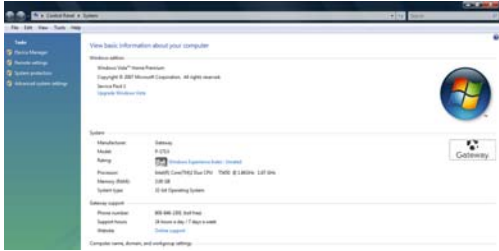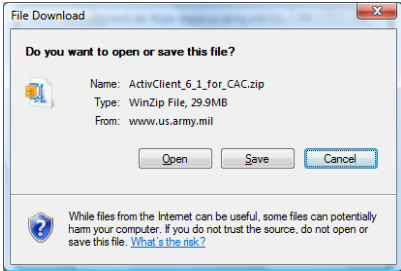| **Step 3:**	**Windows Vista Desktop**
Power on home PC or laptop **Audio Checkpoint:** When you stop hearing the Windows boot-up audio and see the Windows desktop it is finished loading. **Visual Checkpoint:** You will know your Universal Plug and Play (UPnP) CAC Reader is properly installed when you see the reader icon for Your Device in Windows Task Bar.	

Installation of Middleware

In Section III of this instruction, you will learn how to properly install the Middleware software on your home PC or laptop. The Middleware software is what communicates between your CAC Reader your computers operating system.

**Steps to install the Middleware software
on your home PC or laptop**

Step 1: Review the CAC Middleware disclaimer before you download the Middleware and installation instructions from the AKO Knowledge Center.	**Must read and acknowledge!**
Step 2: Determine which Middleware version you will need to download and install on your PC or laptop. **Important Note:** Windows Vista Operating System Versions - Vista 32bit - Vista 64bit	**Your Vista Version** Click here for additional instructions on how to determine which version of Vista you are running!
Step 3: Download Middleware Software **Important Note:** These downloads are for Army personnel only and requires AKO username and password to Open and/or Save. **Secure AKO Knowledge Center Download Location:** Click appropriate link below and select Save to download the Zip file, to a location of your choice, on your PC or laptop for installation in Step 4! - ActivClient for Vista 32bit - ActivClient for Vista 64bit	**AKO CAC Resource Center** Click here to access all CAC Middleware (Army Only) Installation Files

Step 4:	Step-by-Step Installation Instructions
Install Appropriate Middleware Software	

Step 4:
Install Appropriate Middleware Software

Important Note:
If you do not have WinZip or other data compression utility you will need to download and install one prior to completing the installation of your Middleware software.

[Click here to download latest version of WinZip utility from Army Managed No Cost Software!](#)

Visual Checkpoint:
You will know your Middleware software is properly installed when you see the ActivClient Agent icon in the Windows startup tray at the bottom right of your screen.

Step-by-Step Installation Instructions

[Click here for step-by-step instructions for installing Middleware software with screenshots!](#)
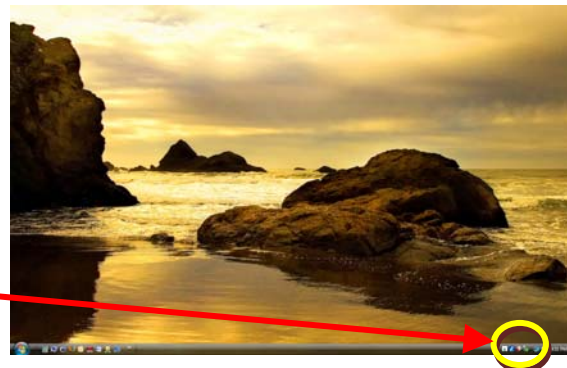
Additional Software Installation Note:

At this point, you should able safely install PureEdge Viewer and ApproveIt without them interfering with the installation, usability or functionality of your CAC Reader! After installing each program restart your computer. For example, install PureEdge Viewer and then restart your computer and then install Approve It with another restart.

Download PureEdge Viewer and Silanis ApproveIt Software

Important Note:
These downloads are for Army personnel only and requires an AKO username and password to Open and/or Save.

Secure AKO Download Location:
- [PureEdge Viewer](#)
- [Silanis ApproveIt](#)

Installation of Department of Defense Security Certificates

In Section IV, you will learn how to properly install the Department of Defense Security Certificates on your home PC or laptop. The DoD Root Certificates allow your Web browser to trust the identity of Web sites such as AKO and helps you avoid the Security Alert windows or pop-ups when visiting these and other DoD or .mil locations.

Steps to install the Department of Defense Security Certificates on your home PC or laptop

Important Note:

You will need administrative rights to run InstallRoot, the program which will install DoD (Department of Defense) Root and DoD trusted External Certificate Authority (ECA) certificates on your PC or laptop.

Step 1:	Latest DoD Certificates Download Site
Download DoD Certificates Click the link below and select Save to download the Zip file, to a location of your choice, on your PC or laptop for installation in Step 2! - InstallRoot 3.07A.zip	 [Click here to access the DoDPKE InstallRoot site for all certificate versions and additional instructions!](#)
Step 2: Install DoD Certificates **Visual Checkpoint:** You may verify that the DoD Certificates have been installed by opening Internet Explorer, clicking Tools/Internet Options/Content/Certificates/Intermediate Certification Authorities. You should see a list of the certificates you just installed under the Intermediate Certification Authorities.	**Step-by-Step Installation Instructions** [Click here for step-by-step instructions for installing DoD Certificates and to verify that they were properly installed with screenshots!](#)

Registration of CAC with Browser

In Section V, you will learn how to properly register your CAC with your Web browser on your home PC or laptop. Your CAC must be registered with the CAC Middleware (ActivClient) Software you previously installed, so that your personal certificates can be read and properly interact with your Web browser.

**Steps to register your CAC with your
Web browser on your home PC or laptop**

Important Note:

When you completed the installation of the CAC Middleware (ActivClient) Software on your PC of laptop the last step in the process was registering your CAC with browser. However, this section is separated into its own instruction as it is often overlooked during the installation process of the Middleware (ActivClient) Software by the end-user and it requires that you have your CAC with you to proceed with this section of instruction and beyond. If you do not have your CAC with a valid working Personal Identification Number (PIN) you will not be able to fully complete this unit of instruction, however you can always complete it later, but your CAC for home use may not be operational and you will not be able to finish the Practical Exercise at the end of the unit!

Step 1: Determine Your Web Browser **Visual Checkpoint:** You will most likely know your primary Web browser, however if not just look at the icons to the right and determine which one you click to access the internet and that is most likely your primary Web browser.	**Web Brower Icons** **Microsoft Internet Explorer** **Mozilla Firefox**
Step 2: Register Your CAC with Your Web Browser **Important Note:** Mozilla Firefox is not supported by the CAC Help Desk on AKO, so the information is posted as a courtesy. Please make sure that if you have Mozilla Firefox, it is version 1.5.0.8 or higher. Read the JTF-GNO IAVM notice 2006-T-0036 - Multiple Vulnerabilities in Mozilla Firefox.	**Step-by-Step Registration Instructions** Click here for step-by-step instructions for registering your CAC with screenshots for Microsoft Internet Explorer Users! Click here for step-by-step instructions for registering your CAC with screenshots for Mozilla Firefox Users!

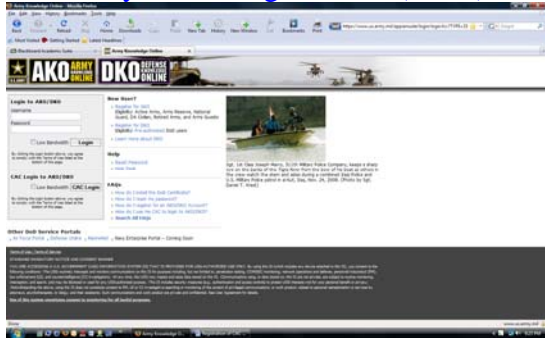# Registration of CAC with Army Knowledge Online (AKO)
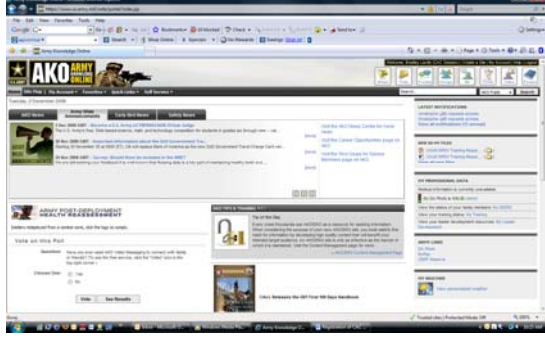
In Section VI, you will learn how to properly register your CAC with Army Knowledge Online (AKO), so that your CAC information will be established with AKO if it has not already been done when your CAC was created.

Steps to register your CAC with Army Knowledge Online (AKO)

Important Note:

If you do not have your CAC with a valid working PIN you will not be able to fully complete this unit of instruction, however you can always complete it later, but your CAC for home use may not be operational and you will not be able to finish the Practical Exercise at the end of the unit!

Step 1: Manually login to Army Knowledge Online (AKO) using your Username and Password.	**Army Knowledge Online (AKO)**
Step 2: Register your CAC with Army Knowledge Online (AKO) **Important Note:** Once your CAC is properly registered with Army Knowledge Online (AKO) you may be required to reset you AKO Password. It is wise to do so at this time as it allows your password to remain in effect for a period of 150 days without having to keep resetting again! To reset your password for the 150 days you will need to log out of AKO and re-login using your CAC and PIN and change your password under the My Account settings.	**Step-by-Step Registration Instructions** Click here for step-by-step instructions to Register your CAC with Army Knowledge Online (AKO) with screenshots!

Testing Your Reader

In Section VII, you will learn how to properly test the CAC Reader you have worked so hard to install on your home PC or laptop. However, the process of testing your reader will need to be done in conjunction with another Soldier who also has completed the same instruction or already has a properly configured and has a working CAC Reader installed on their PC or laptop.

2-334 BN (BCT) AKO CAC Resource Portal

Important Note: This Site is Still Under Constructions!

Various methods to test your CAC are currently being developed at this time and will be posted on the 2-334 BN (BCT) AKO CAC Resource Portal when completed. Everyone should have a pretty good idea about how to test their CAC's after they sit through the hands-on course of instruction scheduled during the January Battle Assembly and time will be provided for you to practice as well as take notes for later use!

2-334 BN (BCT) AKO CAC Resource Portal

Below you will find a link a to the 2-334 BN (BCT) AKO CAC Resource Portal where you will be able to access additional resources such as:

1. Un/Monitored Forums, Blogs and Instant Mail and Video Messaging
2. End-User Feed Back and Evaluation
3. Message Centers
4. Knowledge and Collaboration Centers
5. Training and Resources Links
6. Membership Directory
7. Training Event Calendar
8. Surveys and Polls
9. Comments Section
10. Troubleshooting Q&A Forum

Community Site Details:
Group Name: 2-334 BN (BCT) AKO CAC Resource Portal
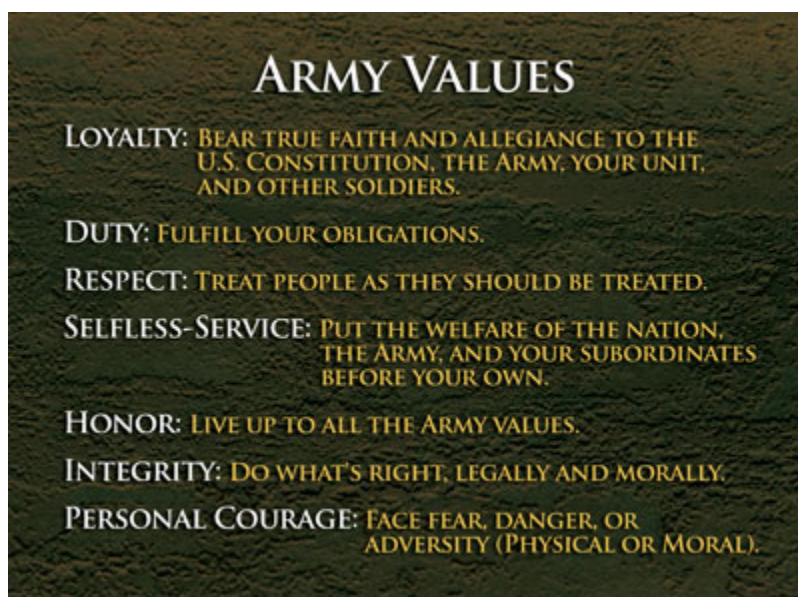**Group Detail:** https://www.us.army.mil/suite/group/94679
Homepage: 2-334 BN (BCT) AKO CAC Resource Portal Home
Homepage URL: https://www.us.army.mil/suite/page/594149
Knowledge Center URL: https://www.us.army.mil/suite/kc/13223195

Wrapping It Up!

ARMY VALUES

LOYALTY: Bear true faith and allegiance to the U.S. Constitution, the Army, your unit, and other soldiers.

DUTY: Fulfill your obligations.

RESPECT: Treat people as they should be treated.

SELFLESS-SERVICE: Put the welfare of the nation, the Army, and your subordinates before your own.

HONOR: Live up to all the Army values.

INTEGRITY: Do what's right, legally and morally.

PERSONAL COURAGE: Face fear, danger, or adversity (physical or moral).

Well you made it and I hope that everything went well and you are sitting in front of your PC or laptop with your CAC in your reader preparing to sign some promotion orders, yours of course!

As stated at the beginning of the instruction, this was produced to act only as a guide and to attempt to make some order out of what was a very cumbersome and labor intensive process. What I tried to do was break it down using screen shots that the average computer user could hopefully sit down and follow, however, if you are so inclined and feel the need to jump ahead or modify it in any way please feel free. All that I ask is that you keep to the basics and send me feedback in areas that you may uncover where my research or instruction may need tweaked!

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