DoD Public Key Enablement (PKE) Reference Guide

Enabling Smart Card Logon for Linux Using Centrify Suite 2012.4

Contact: dodpke@mail.mil
URL: http://iase.disa.mil/pki-pke/
URL: http://iase.disa.smil.mil/pki-pke/

Enabling PKI Technology
for DoD users

Enabling Smart Card Logon for Linux Using Centrify Suite 2012.4

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DoD PKE Team

Revision History

Issue Date	Revision	Change Description
12/14/12	1.0	Initial Document Developed
4/18/2013	1.1	Modified order of steps based on comments
2/12/2014	1.2	Updated to specify Centrify Suite 2012.4

Contents

Introduction

The DoD Public Key Enablement (PKE) Reference Guides (RGs) are developed to help organizations augment their security posture through the use of the DoD and National Security Systems (NSS) Public Key Infrastructures (PKI). The PKE Reference Guides contain procedures for enabling products and associated technologies to leverage the security services offered by the DoD and NSS PKIs.

Purpose

The procedures in this document guide the reader in configuring Linux for Smart Card Login (SCL) using the Centrify Suite 2012.4. The information provided is a guide based on DoD best practices; however, users should consult with their organization's PKI help desk to determine organization-specific guidelines.

Scope

This document is intended for all users of PKI technologies. No in-depth knowledge of PKI is required. Some experience installing and configuring software on Linux and Windows platforms is helpful when reading this guide. Administrative privileges will be required. It is assumed that there is already an established Active Directory domain configured for smart card logon using one of the DoD PKE guides for enabling smart card logon on Microsoft Windows Server. Please refer to the appropriate *Microsoft Windows Enabling Smart Card Logon* guide in the PKE A-Z section of the DoD PKE Engineering website at - http://iase.disa.mil/pki-pke.

Background

Smart card logon provides a cryptographic based logon method using DoD PKI keys and certificates. This logon method is a two factor authentication mechanism using something you have, the smart card, and something you know, the smart card PIN.

As part of the DoD Instruction (DoDI) 8520.02[i] requirement to properly secure DoD information systems and networks, the enterprise must public key enable network access. This requires that all local and remote access be authenticated using approved DoD PKI credentials. This may require deployment of new hardware and software, and requires special configuration of Active Directory and other remote access technologies such as Virtual Private Networks (VPNs), if deployed.

The Centrify Suite provides capabilities for smart card-based cryptographic logon for Linux systems. However, implementing Common Access Card (CAC)-based and Secure Internet Protocol Router Network (SIPRNet) hardware token-based authentication using DoD PKI will require additional planning and poses additional challenges during both the implementation and following maintenance phases.

Planning and Preparation

Centrify has several versions of their product, but the free Express version does not support smart card logon. The standard version or higher is required for Linux smart card logon and should be obtained through your local procurement office. This guide was written using Centrify Suite 2012.4, which is the first version of the Suite to support smart card logon. Note, during testing of the 2012.5 version of the Suite it was noticed there is an issue preventing smart card logon from working with this version. For this reason it is recommended to use the 2012.4 version and not 2012.5. The Centrify Suite of software requires the Active Directory domain controller to be running Windows Server 2003 R2 or later. This is required because the Active Directory domain controller must support IETF RFC 2307[ii], which was first introduced in Windows Server 2003 R2. The Centrify software will require new containers be created in Active Directory for storing items such as licenses, zone information, and separating Linux computers and users from Windows. Please see the Centrify Suite Admin Guide[iii] for more information on new containers and for an explanation of zones. Proper planning of the Organizational Unit (OU) structure required should be done before starting installation. For more information visit http://www.centrify.com.

This document is written with general Linux instructions but not all versions of Linux may be supported by Centrify. Please refer to guidance from Centrify for a complete list of support Linux distributions.

On Windows Server 2012 Active Directory domain controllers please install the .NET Framework 3.5 Features through Add Roles and Features before proceeding with this guide.

Centrify Suite Installation

The first step in installing the Centrify Suite is to install the DirectManage tool. This is a utility that must be installed on a Windows system. DirectManage can be installed on a domain controller or a separate Windows workstation used for management tasks. Due to its interaction with the domain controller installing DirectManage on the domain controller is the recommendedway to proceed. After DirectManage is installed then the DirectControl agent needs to be installed on the Linux system.

Installation of Centrify DirectManage

These steps should be performed on the Windows system where DirectManage will be installed.

1) Obtain the Centrify Suite Enterprise Edition 32-bit or 64-bit installer depending on the Windows system you are installing it on. If the installer is in a zip format, extract everything from the zip file.
2) Execute the **autorun.exe** file by double clicking it. For Windows Vista or 7 right-click the installation file and click **Run as Administrator.** Enter logon credentials if prompted.
3) In the Centrify window under Install Centrify Suite Enterprise Edition, double click **Centrify DirectManage.**
4) In the Centrify DirectManage Installation window, click **Next** to proceed.
5) On the Review License Agreement screen, select the **I agree to these terms** radio button and then click **Next** to proceed.
6) On the User Registration screen, enter your **Name** and **Company Name**, then click **Next** to proceed.
7) On the Select Components screen, click the check boxes next to the components you want to install to highlight them. Centrify recommends selecting all the components. Click **Next** to proceed.
8) On the Choose Destination Folder screen, leave the default value or select a different location if required, then click **Next** to proceed.
9) On the Disable Publisher Evidence Verification screen, it is recommended to uncheck the disable verification box and click **Next** to proceed. Note, that having publisher evidence verification enabled could slow down startup especially on systems which are not connected to the internet.
10) On the Confirm Installation Settings screen, verify the settings, then click **Next** to proceed.
11) On the Setup Complete screen, click **Finish** to end the installation.

Install DirectControl Agent on Linux System

These steps will outline the procedure to install the DirectControl agent on the Linux system. The procedure documented is the manual installation method, Centrify also has a Deployment Manager installation method which can identify Linux machines on the network and push the DirectControl agent to them. The Deployment Manager method might be a better choice if there are many systems that require the agent. See the Centrify Suite Admin Guide, available in the Centrify Support site at http://www.centrify.com/, for more information on the Deployment Manager installation method. Before executing these steps, the Linux system should have its network configuration completed and be able to access the DNS server and domain controller.

1) Obtain the Centrify DirectControl Agent for the Linux operating system being used and copy to Linux system. If necessary extract the installation package (ex: tar xzvf <package-name>.tgz).
2) In a Linux Terminal, change to the directory where the installation package was extracted and then execute the installation script by running */bin/sh ./install.sh* as the root user.
3) The Centrify DirectControl Agent installation will execute the Centrify adcheck utility which verifies the system is ready for DirectControl installation. If there are any failures from adcheck they should be addressed before proceeding with installation. When prompted to proceed with installation, type *E* to proceed with Enterprise installation and press **Enter** if there are no failures to address.
4) When prompted to run adcheck, type *Y* and press **Enter**.
5) When prompted to enter the Active Directory domain to check, type the name of your domain (ex: *pke.mil*) and press **Enter**.
6) When prompted to join and Active Directory domain type *N* and press **Enter**.

   NOTE: The Linux system will be joined to the domain later in the process and should not be joined at this time.
7) The installation script will let you verify the choices you selected. If everything is correct type *Y* and press **Enter** to continue.
8) The installation script will now attempt to install the DirectControl agent. It should state that Install.sh completed successfully if installation was successful.

   NOTE: You may see a warning that adcheck exited with warning(s) which can happen and should not impact installation. If adcheck exits with failures that will impact installation and should be investigated.
9) The Linux system should now be rebooted.

Centrify Suite Configuration

Active Directory Configuration to support Centrify

These steps will be executed on the domain controller to prepare for the Linux systems and users. It is recommended to create a separate container (OU) for Linux systems, groups, and users. These steps will be different depending on the domain configuration for your environment. Please ensure proper planning is done before proceeding.

1) Launch Active Directory Users and Groups, navigate to **Start** > **Programs** > **Administrative Tools** > **Active Directory Users and Computers.**

2) Expand the domain and create new OUs as required by your organization. A new OU can be created by right-clicking the domain and selecting **New > Organizational Unit**. Then enter the name of the new OU in the New Object window and click **OK** to create the new OU. Repeat as required to create additional OUs for your environment.

An example setup might be to create an OU named "Linux" and under that OU create OUs for Service Accounts, Linux Groups, and Linux Servers.

Configuring DirectControl Administration Console

These steps will be performed on the Windows machine where the Centrify DirectManage software was installed earlier in the installation section.

1) Open the DirectControl Administration Console, click **Start > All Programs > Centrify > DirectControl > Centrify DirectControl**.

2) At the Connect to Forest window, specify the domain controller. If you are not logged in as an administrator, click the **Connect as another user** check box and enter the user name and password for a domain admin account. If you are logged in as an administrator, do not click the **Connect as another user** check box. Click **OK**.

3) At the Welcome to the Centrify DirectControl Setup Wizard screen, click **Next** to proceed.

4) If the User Credentials screen appears, leave **use currently connected user credentials** selected and click **Next.**

5) At the Install Licenses screen, you must specifiy where Centrify should create the Active Directory container to store licenses. Click **Browse** to find a location. It is recommended you choose a location under the new OU container you created in the previous section. In the Browse for Container window, select the previously created OU (ex: Linux) and then click **Create**. In the Create New Object screen, leave the **Type** as **container** and in the **Name** field enter a name for the new container (ex: Licenses). Then click **OK** to create the new container. Back at the

Browse for Container window, select the newly created container (ex: Licenses) and then click **OK.** Back at the Install Licenses window, verify the License container location (ex: pke.mil\Linux\Licenses)and click **Next** to proceed.

6) You may see a window the states *All the user accounts in this AD forest will be granted Read properties permission on container …* Click **Yes** to continue.
7) At the Install License Key screen, if you have a license from Centrify enter the license key and click the **Add** button, or click the **Import** button and find the license file then click **Open**. Click **Next** to proceed.
8) At the Default Container for Zones screen, ensure the **Create default zone container** box is checked then click the **Browse** button. In the Browse for Container window, select the previously created OU (ex: Linux) and then click **Create**. In the Create New Object screen, leave the **Type** as **container,** and in the **Name** field enter a name for the new container (ex: Zones). Then click **OK** to create the new container. Back at the Browse for Container window, select the newly created container (ex: Zones) and then click **OK.** Back at the Default Container for Zones window, verify the Zone container location (ex: pke.mil\Linux\Zones)and click **Next** to proceed.
9) At the Delegate Permission screen, it is recommended to leave the check box selected and click **Next** to proceed.
10) At the Register the AD Administrative Notification Handler screen, it is recommended to click the **check box** to select it and click **Next** to proceed. This will allow the system to automatically maintain the integrity of the data stored in the Centrify Unix profiles.
11) At the Setup Property Pages screen, it is recommended to leave the box unchecked and click **Next** to proceed. Without this activated, the DirectControl property pages will still be available in AD Users and Computers. If you want the property pages available from all AD administration screens, check the box to enable the profile property pages.
12) At the Summary screen, click **Next** to proceed.
13) At the Completing the Centrify DirectControl Setup Wizard screen, click **Finish.**

Creating a Zone in Centrify

Centrify DirectControl requires that either at least one zone be created manually or that Auto Zone be used. Because Auto Zone allows every AD user and group to become valid users and groups for the joined Linux system, Auto Zone is not recommended for most environments. The zone layout should be planned ahead of time before software installation. Please see the Centrify Suite Admin guide for an explanation of zones. These steps contain the general procedures for creating a zone.

1) Open the Centrify DirectControl Administartion Console if it is not already open. Click **Start > All Programs > Centrify > DirectControl > Centrify DirectControl**.
2) At the Connect to Forest window, specify the domain controller then click the **Connect as another user** check box. Enter the user name and password for a domain admin account. Click **OK**.
3) Expand **Console Root > Centrify DirectControl** and right-click **Zones**. Select **Create New Zone**.
4) At the Specify Zone Properties window, complete the **Zone name** and **Description** fields and leave **Container** as the selected Object Type. The **Domain controller** field can be completed with the master domain controller for this zone to avoid UID and GID conflicts later on by using different domain controllers to add users and groups to a zone. Click **Next** to proceed.
5) At the Agent Compatibility screen, leave **I want a hierarchical zone option** selected and click **Next** to proceed.
6) At the Specify Zone Storage Model screen, leave the **Standard zone** option selected and click **Next** to proceed.
7) At the Finish Add Zone screen, click **Finish** to proceed.
8) Create additional zones as required.

Creating Linux Groups

This section will create a group for Linux users and add members to the group. It is recommend this group be created under the OU container created in the **Active Directory Configuration to Support Centrify** section. An example location for this new group is *pke.mil\Linux\Linux Groups*.

1) On the Domain Controller click **Start** > **Programs** > **Administrative Tools** > **Active Directory Users and Computers.**
2) Expand the domain and find the OU created for the Linux data. Under that OU, find the OU for Linux groups (ex: *pke.mil\Linux\Linux Groups*). Right-click the OU for the Linux groups and select **New > Group.**
3) Enter a name for the group (ex: Linux Users) in the **Group name** field. The other fields can be left at the default values. Click **OK** to create the new group.
4) In the right-hand pane of the Active Directory Users and Computers window, select the newly created group. Then right-click and select **Properties.**
5) Click the **Members** tab of the group properties window and add members to the group. When done adding members click **OK.**

Zone Provisioning

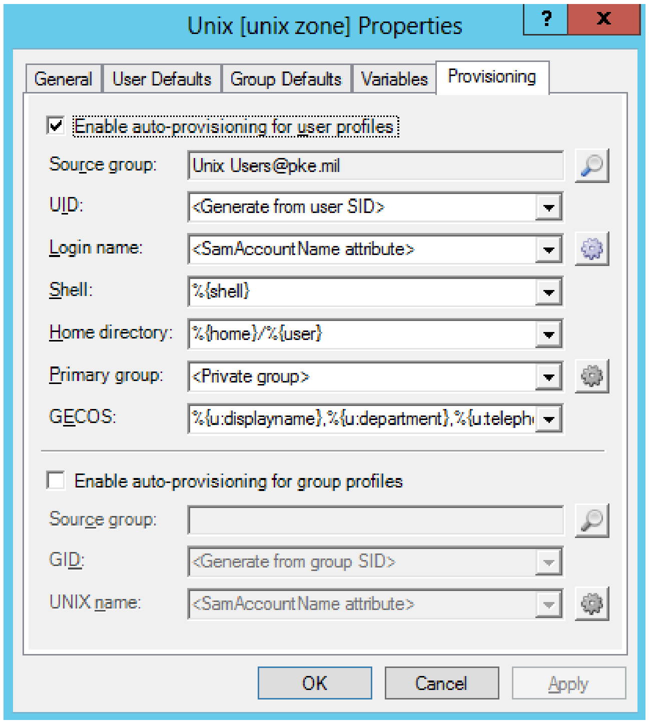
These steps will perform zone provisioning for the desired zone created previously. This section is only necessary if auto provisioning will be used. If all accounts will be configured manually or in some other way, these steps will not be required. See the Centrify Admin Guide for more information.

1) In the Centrify DirectControl Administation Console, expand **Console Root > Centrify DirectControl > Zones**. Right-click the zone where you want to add the Linux users and select **Properties.**

2) In the zone properties window, select the **Provisioning** tab.

3) Click the **Enable auto-provisioning for user profiles** check box.

4) For Source group, click the button to find the group. In the Find groups window; in the **Name** field type the name of the group where Linux users will be included and click **Find Now.** Highlight the group at the bottom of the window and click **OK**. For the **Shell** field, enter *%{shell}*. In the **Home directory** field, enter *%{home}/%{user}*. In the **GECOS** field, enter *%{u:displayname},%{u:department},%{u:telephonenumber}*. These values can be different for each environment. The screenshot below shows the values noted in this step.



☑ Enable auto-provisioning for user profiles

Source group: Unix Users@pke.mil

UID: <Generate from user SID>

Login name: <SamAccountName attribute>

Shell: %{shell}

Home directory: %{home}/%{user}

Primary group: <Private group>

GECOS: %{u:displayname},%{u:department},%{u:teleph

☐ Enable auto-provisioning for group profiles

Source group:

GID: <Generate from group SID>

UNIX name: <SamAccountName attribute>

5) If a window appears stating *This zone is now auto-provisioned and any existing UNIX profiles may be deleted*, click **OK** to continue.

6) Open the Zone Provisioning Agent and click **Start > All Programs > Centrify > Zone Provisioning Agent > Zone Provisioning Agent Configuration.**

7) At the Centrify Zone Provisioning Agent Configuration Panel window, under **Polling interval** the recommended value is **10 minutes**. Change to the desired value.

8) Under Event log, the recommended option is **Write the UNIX profiles for the provisioned users and groups to the Event Log**. Select this option using the radio button.

9) Under Service account, enter the account name and password for a delegated service account with permissions to run as a service, and create and delete UNIX profiles in the global zone.

10) Click the **Apply** button and then click the **Start** button.

11) Click the **Close** button.

12) Open the Services Snap-In by clicking **Start** > **Programs** > **Administrative Tools** > **Services.**

13) Verify the **Centrify Zone Provisioning Agent** service has a startup type of Automatic. If it is not set to Automatic double click the service and change the **Startup Type** to **Automatic.** Then click OK and close the Services Snap-In.

Centrify Group Configuration

This section will create the group within Centrify and configure it to allow login to the Linux system.

1) On the Windows system with Centrify DirectControl Adminstration Console, open the console, and click **Start > All Programs > Centrify > DirectControl > Centrify DirectControl.** If prompted enter the userid and password.

2) Expand **Console Root > Centrify DirectControl > Zones > [*zone name]* > UNIX Data**.

3) Right-click **Groups** and select **Create UNIX Group.**

4) In the **Name** field, type the name of the group previously created in step 3 of the Creating Linux Groups section and click **Find Now**. Highlight the group at the bottom of the screen and click **OK.**

5) At the Set UNIX Group Profile window, click the check box beside **GID** and enter a value that will be used as the **Linux Group ID** for this group. Click the check box beside UNIX group name and enter a name that will be used as the Linux group name for this group. Leave the **Users are required to be a member of this group** box unchecked. Click **OK.**

6) Back at the Centrify DirectControl Adminstration Console screen expand **Console Root > Centrify DirectControl > Zones > [***zone name]* > **Authorization**.

7) Right-click **Role Assignments** and select **Add Group.**

8) In the **Name** field, type the name of the group previously created in step 3 of the Creating Linux Groups section and click **Find Now**. Highlight the group at the bottom of the screen and click **OK.**

9) At the Add Access group window, click **Browse** beside the **Role** field. Select the login role and click **OK.** Then click **OK** again.

Joining Linux System to Domain

This section will join the Linux system to the domain and test to confirm userid/password login is working.

Joining Linux System to Domain

These steps should be performed on the Linux system.

1) Open a terminal window and become the root user **su –.** Enter the root user password when prompted and press **Enter.**
2) Execute the **adjoin** command to join domain, *adjoin [domain] -z [zone-name] -c [container] -u [account]***.** Where *[domain]* is the name of the Active Directory domain, *[zone-name]* is the name of the Centrify zone created earlier in this guide, *[container]* is the name of the Active Directory OU created earlier to hold the Linux systems (ex: *pke.mil/Linux/Linux Servers*), and *[account]* is the Active Directory account with privileges to join a system to the domain. Example command: *adjoin pke.mil –z Global –c "pke.mil/Linux/Linux Servers" –u Administrator*. Press **Enter** to execute the adjoin command.
3) When prompted, enter the password for the AD user specified in the adjoin command from step 2. Press **Enter.**
4) The adjoin command should finish successfully stating you have joined the Acitve Directory domain.
5) Reboot the Linux system.

Test Linux Logon Using Active Directory Credentials

These steps will test logging on to the Linux system using a userid and password for an Active Directory user account. It is recommended to perform these steps from a test system using a test account when possible.

1) At the **Linux Username** login prompt, enter the username for an Active Directory user account that was added to the Linux group in the section **Creating and Configuring Linux Groups**. Then enter the password for the same Active Directory user account and attempt to log in.
2) The system should allow you to log in and the user's home directory should be */home/user* as specified in the zone provisioning section earlier in this guide.

Enabling Smart Card Logon on Linux Systems

This section will go through the required steps to get smart card logon working on the Linux system. Note that RHEL 6 will most likely need smart card packages installed prior to proceeding with enabling smart card support. This is noted in the Centrify Smart Card Configuration Guide See the guide for more details. This section assumes that Active Directory user accounts have already been configured for smart card logon (see Appendix A) and the account that will be tested was added to the Linux Users group earlier in **the Creating and Configuring Linux Groups** section.

Enabling Smart Card Support on Linux Systems

These steps must be performed on the Linux system to enable Centrify Smart Card support.

1) Open a terminal window and become the root user **su –.** Enter the root user password when prompted and press **Enter.**
2) Execute **sctool** to enable smart card support, *sctool –e*.
3) Verify smart card support was successfully enabled with *sctool –s***.** The command should return a message stating that smart card support is enabled.
4) Log out of the system and notice the login screen should now show a note about inserting your Smart card or entering your username. Insert the CAC into the card reader.
5) The login prompt should prompt for the Smart card PIN. Type the PIN and press **Enter.** The system login using the smart card should be successful.

Centrify Group Policy Changes

The Centrify software allows for group policy to be applied to the Linux systems. Items such as certificate revocation checking, smart card removal behavior, and login settings can be configured using group policy.

Setting Centrify Group Policy

These steps contain general instructions for creating and configuring a Group Policy Object.

1) From the Windows system where Centrify DirectManage was installed, open the Group Policy Management console and click **Start > Administrative Tools > Group Policy Management.**
2) Find the location where you would like the GPO created (ex: *Forest* > *Domains* > *pke.mil* > *Linux*). Right-click the location and select **Create a GPO in this domain**, and **Link it here**.
3) In the New GPO window, type a name for the GPO (ex: Centrify Linux SCL) and click **OK.**
4) On the right side of the Group Policy Management console, you should see the newly created GPO. Right-click the **GPO** and select **Edit.**
5) In the Group Policy Management Editor window under Computer Configuration, expand **Policies > Centrify Settings.**
6) Right-click **Centrify Settings** and select **Add/Remove Templates.**
7) In the Add/Remove Templates window, click the **Add** button. In the Open window, select all the Centrify .xml template files and click **Open.** If the Open window does not start at the location of the Centrify templates, they are normally located at *C:\Program Files\Centrify\DirectControl\group policy\policy* and have names such as centrify_linux_settings.xml.
8) Back in the Add/Remove Templates window, click **OK.**
9) At the Group Policy Management Editor window, a number of subfolders should now appear. Expand down to find the location of the policy you would like to set.

   NOTE: There are also Centrify Group Policy settings located under User Configuration > Policies > Centrify Settings.

10) On the right side, double-click the setting in question then make the desired changes and click **Ok** to save them. This completes the GPO change. The Centrify DirectControl agent running on the Linux system will pick up these changes the next time it checks in For immediate updating of group policy, the **adgpupdate** command can be run from the Linux system.

Appendix A - Enabling Smart Card Login for Active Directory User Accounts

This Appendix will outline the steps required in Active Directory to make smart card login available for AD users.

User Accounts

To map a user's certificate to their AD account in Windows Server 2008 using the standard method of mapping (Principal Name), the certificate must contain two things:

- An Enhanced Key Usage (EKU) of "Smart Card Logon" or a Key Usage of "Digital Signature"
- A Principal Name value in the SAN attribute of the certificate - this Principal Name must be in the form of xxxxx@domain_suffix

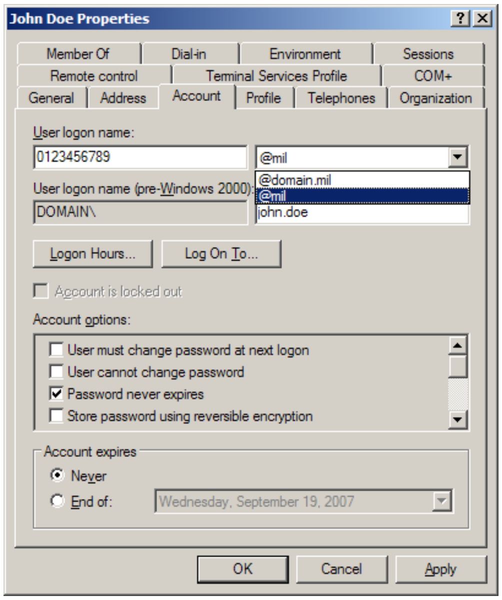
Their account **User Logon Name** must be renamed to match the **Principal Name** in the certificate. Existing user accounts can be modified easily in **Active Directory Users and Computers**, and new users can be configured properly from the start using the existing new user wizard.

Manually Remapping Existing Users who currently authenticate via username/password

1) Navigate to **Start** > **Programs** > **Administrative Tools** > **Active Directory Users and Computers.**
2) Navigate to a user who will be migrated to smart card logon.
3) Right-click the user and select **Properties**.
4) Select the **Account** tab. Note the user's logon name and UPN suffix.
5) Change the **User Logon Name** to match the **Principal Name** of this user.

Unclassified/NIPRNet systems:

Select the @**mil** extension from the domain suffix pull-down box to match the domain suffix in the user's certificate **Principal Name** value. Do not change the User logon name (pre-Windows 2000) fields.



User logon name: 0123456789 @mil

@domain.mil
@mil
john.doe

User logon name (pre-Windows 2000): DOMAIN\

□ Account is locked out

Account options:

□ User must change password at next logon
□ User cannot change password
☑ Password never expires
□ Store password using reversible encryption

Account expires

● Never
○ End of: Wednesday, September 19, 2007

Secret/SIPRNet systems

Select the **@smil.mil** or **@agency.smil** extension from the domain suffix drop-down box to match the domain suffix in the user's certificate **Principal Name** value. Do not change the User logon name (pre-Windows 2000) fields.

6) Scroll down to the **Account options** section and check **Smart card is required for interactive logon**.

7) Click **OK** to save the modifications.

Manually Creating New Users

1) Navigate to **Start** > **Programs** > **Administrative Tools** > **Active Directory Users and Computers.**

2) Navigate to the OU container that will hold the new user. Right-click the container and select **New > User**.

3) Enter the user's information similar to the screen shot below – enter the user's real name information, but for the **User Logon Name** enter the **EDI-PI** of the user with the appropriate domain suffix:

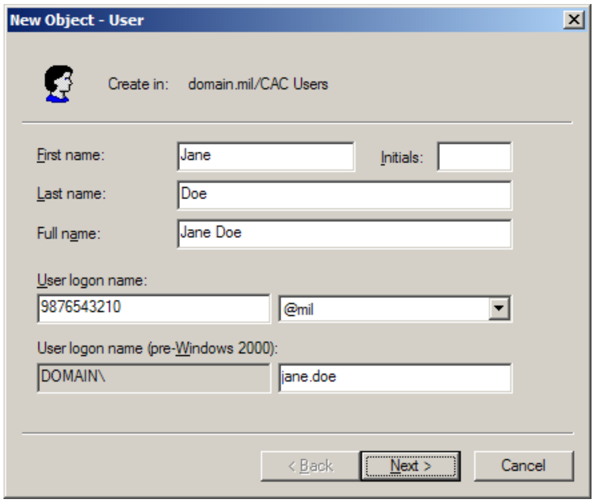
Unclassified/NIPRNet systems:

EDIPI@**mil** domain suffix

Secret/SIPRNet systems

EDIPI@**smil.mil** or EDIPI**@agency.smil** domain suffix

Form the **User Logon Name** (pre-Windows 2000) as it would conform to the proper username convention of your network. Click **Next** when done.



New Object - User

Create in: domain.mil/CAC Users

First name: Jane

Initials:

Last name: Doe

Full name: Jane Doe

User logon name: 9876543210 @mil

User logon name (pre-Windows 2000): DOMAIN\ jane.doe

4) Enter the appropriate temporary password for the user, selecting the standard options for your domain. Click **Next** when done.

5) When done, click **Finish**.

Appendix B: Centrify Known Issues

This Appendix will document some known issues that could impact the use of the Centrify Suite with Linux.

Issue with Screen Saver Lockout on RHEL 5 and CentOS 5

There is a known issue on RHEL 5 and CentOS 5 systems with not being able to log back into the system with the smart card after screen saver lockout occurs. This same issue may occur with Active Directory users that login using userid/password. Centrify has this documented in their knowledge base (KB-1629) and states it is an issue with the gnome screensaver.

Appendix C: Acronyms and Abbreviations

AD	Active Directory
CA	Certification Authority
CAC	Common Access Card
DC	Domain Controller
DISA	Defense Information Systems Agency
DN	Distinguished Name
DNS	Domain Name System
DoD	Department of Defense
DoDI	DoD Instruction
EDI-PI	Electronic Data Interchange – Personnel Identifier
EKU	Enhanced Key Usage (Microsoft definition)
GID	Global Identifier
GPO	Group Policy Object
JRE	Java Runtime Environment
MMC	Microsoft Management Console
MSI	Microsoft Installer file format
NIPRNet	Unclassified but Sensitive Internet Protocol Router Network
NSA	National Security Agency
NSS	National Security Systems
OU	Organizational Unit
PIN	Personal Identification Number
PKE	Public Key Enablement
PKI	Public Key Infrastructure
RG	Reference Guide
SAN	Subject Alternative Name
SCL	Smart Card Logon
SIPRNet	Secure Internet Protocol Router Network
STIG	Security Technical Implementation Guide
UID	Unique Identifier
UPN	User Principal Name
URL	Uniform Resource Locator
VPN	Virtual Private Network

Appendix D: Support and Information

Website

Please visit the URL below for additional information.

http://iase.disa.mil/pki-pke (NIPRNet)

http://iase.disa.smil.mil/pki-pke (SIPRNet)

Technical Support

Contact technical support.

dodpke@mail.mil

Appendix E: References

[i] Department of Defense Instruction (DoDI) 8520.02: Public Key Infrastructure (PKI) and Public Key (PK) Enabling, http://www.dtic.mil/whs/directives/corres/pdf/852002p.pdf.

[ii] RFC 2307: An Approach for Using LDAP as a Network Information Service, https://tools.ietf.org/html/rfc2307

[iii] Centrify Suite documentation, http://www.centrify.com/support/documentation.asp