SafeNet Authentication Client

Integration Guide

Using SAC CBA for Check Point Security Gateway

Document Information

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Trademarks

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Third-Party Software Acknowledgement

This document is intended to help users of SafeNet products when working with third-party software, such as Check Point Security Gateway.

Material from third-party software is being used solely for the purpose of making instructions clear. Screen images and content obtained from third-party software will be acknowledged as such.

Description

Remote access poses both a security and a compliance challenge to IT organizations. The ability to positively identify users – often remote users – requesting access to resources is a critical consideration in achieving a secure remote access solution. Deploying remote access solution without strong authentication is like putting your sensitive data in a vault (the datacenter), and leaving the key (user password) under the door mat.

A robust user authentication solution is required to screen access and provide proof-positive assurance that only authorized users are allowed access.

PKI is and effective strong authentication solution to the functional, security, and compliance requirements.

SafeNet Authentication Client (SAC) is a public key infrastructure (PKI) middleware that provides a secure method for exchanging information based on public key cryptography, enabling trusted third-party verification of user identities. SafeNet's certificate-based tokens provide secure remote access, as well as other advanced functions, in a single token, including digital signing, password management, network logon, and combined physical/logical access.

The tokens come in different form factors, including USB tokens, smart cards, and software tokens. All of these form factors are interfaced using a single middleware client, SafeNet Authentication Client (SAC). The SAC generic integration with CAPI, CNG, and PKCS#11 security interfaces enables out-of-the-box interoperability with a variety of security applications, offering secure web access, secure network logon, PC and data security, and secure email. PKI keys and certificates can be created, stored, and used securely with the hardware or software tokens.

SafeNet Authentication Manager (SAM) provides your organization with a comprehensive platform to manage all of your authentication requirements, across the enterprise and the cloud, in a single, integrated system. SAM enables management of the complete user authentication life cycle. SAM links tokens with users, organizational rules, and security applications to allow streamlined handling of your organization's authentication infrastructure with a flexible, extensible, and scalable management platform.

SAM is a comprehensive token management system. It is an out-of-the-box solution for Public Certificate Authorities (CA) and enterprises to ease the administration of SafeNet's hardware or software tokens devices. SAM is designed and developed based on the best practices of managing PKI devices in common PKI implementations. It offers robust yet easy to customize frameworks that meets different organizations' PKI devices management workflows and policies. Using SAM to manage tokens is not mandatory, but it is recommended for enterprise organizations.

For more information, refer to the *SafeNet Authentication Manager Administrator Guide*.

Check Point Security Gateway protects dynamic virtualized environments and external networks (such as private and public clouds) from internal and external threats, by securing virtual machines and applications with a full range of Check Point Software Blades.

This document provides guidelines for deploying certificate-based authentication (CBA) for user authentication to Check Point Security Gateway using SafeNet tokens.

It is assumed that the Check Point Security Gateway environment is already configured and working with static passwords prior to implementing SafeNet multi-factor authentication.

Check Point Security Gateway can be configured to support multi-factor authentication in several modes. CBA will be used for the purpose of working with SafeNet products.

Applicability

The information in this document applies to:

- **SafeNet Authentication Client (SAC)**—SafeNet Authentication Client is the middleware that manages SafeNet's tokens.
- **Check Point Security Gateway**

Environment

The integration environment that was used in this document is based on the following software versions:

- **SafeNet Authentication Client (SAC)**—Version 9.0
- **Check Point Security Gateway**—Version R77
- **Check Point Endpoint Security Client**—Version E80.41

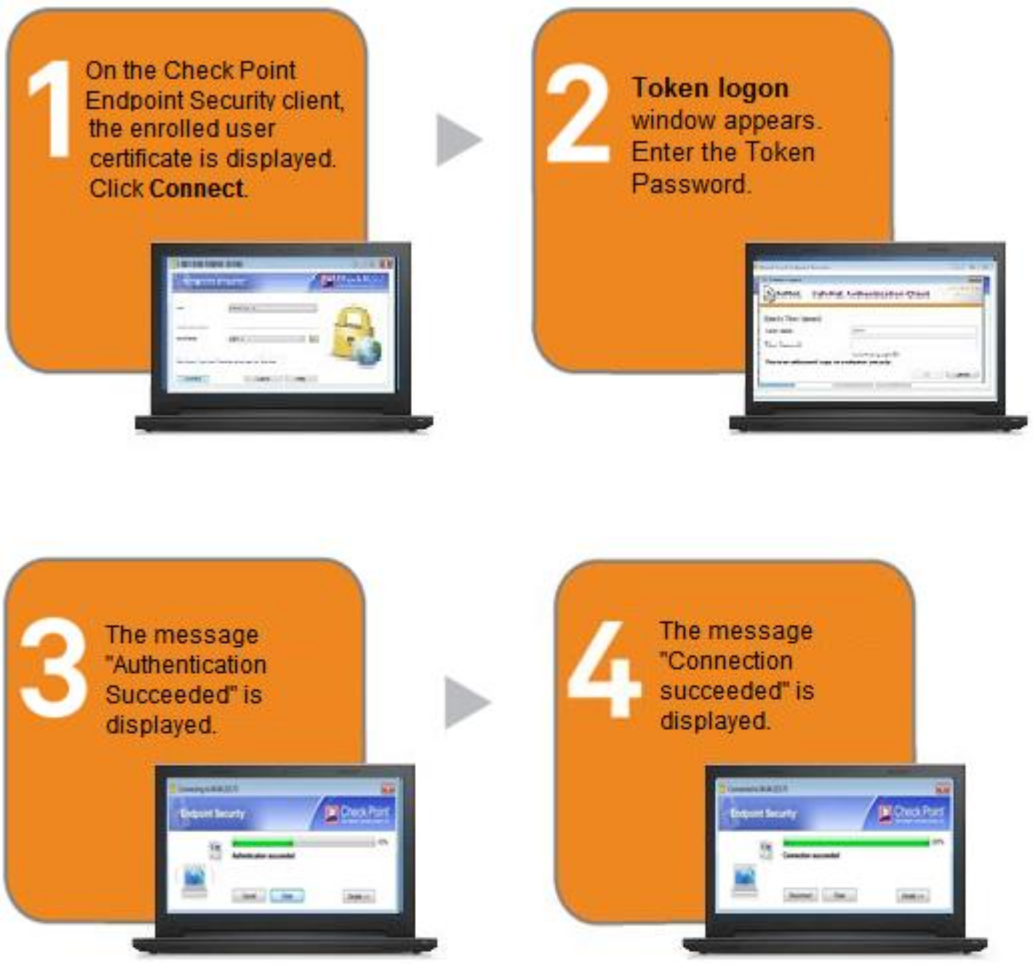
Audience

This document is targeted to system administrators who are familiar with Check Point Security Gateway and are interested in adding certificate-based authentication capabilities using SafeNet tokens.

CBA Flow using SAC

The diagram below illustrates the flow of certificate-based authentication for Check Point Security Gateway using the SafeNet eToken.

The user inserts eToken (containing the certificate enrolled) to the USB slot, and then starts the Check Point Endpoint Security VPN client.



1 On the Check Point Endpoint Security client, the enrolled user certificate is displayed. Click **Connect**.

2 **Token logon** window appears. Enter the Token Password.

3 The message "Authentication Succeeded" is displayed.

4 The message "Connection succeeded" is displayed.

Prerequisites

This section describes the prerequisites that must be installed and configured before implementing certificate-based authentication for Check Point Security Gateway using SafeNet tokens:

- To use CBA, the Microsoft Enterprise Certificate Authority must be installed and configured. In general, any CA can be used. However, in this guide, integration is demonstrated using Microsoft CA.
- If SAM is used to manage the tokens, TPO should be configured with MS CA Connector. For further details, refer to the section “Connector for Microsoft CA” in the *SafeNet Authentication Manager Administrator’s Guide*.
- Users must have a SafeNet token with an appropriate certificate enrolled on it.
- SafeNet Authentication Client (9.0) should be installed on all client machines.

Supported Tokens in SAC

SAC supports a number of tokens that can be used as second authentication factor for users who authenticate to Check Point Security Gateway.

SafeNet Authentication Client 9.0 (GA) supports the following tokens:

Certificate-based USB tokens

- SafeNet eToken PRO Java 72K
- SafeNet eToken PRO Anywhere
- SafeNet eToken 5100/5105
- SafeNet eToken 5200/5205
- SafeNet eToken 5200/5205 HID and VSR

Smart Cards

- SafeNet eToken PRO Smartcard 72K
- SafeNet eToken 4100

Certificate-based Hybrid USB Tokens

- SafeNet eToken 7300
- SafeNet eToken 7300-HID
- SafeNet eToken 7000 (SafeNet eToken NG-OTP)

Software Tokens

- SafeNet eToken Virtual
- SafeNet eToken Rescue

Configuring Check Point Security Gateway

The Check Point SmartDashboard application can be used to configure the Check Point SSL VPN or the IPSec VPN.

Configuring Check Point Security Gateway requires:

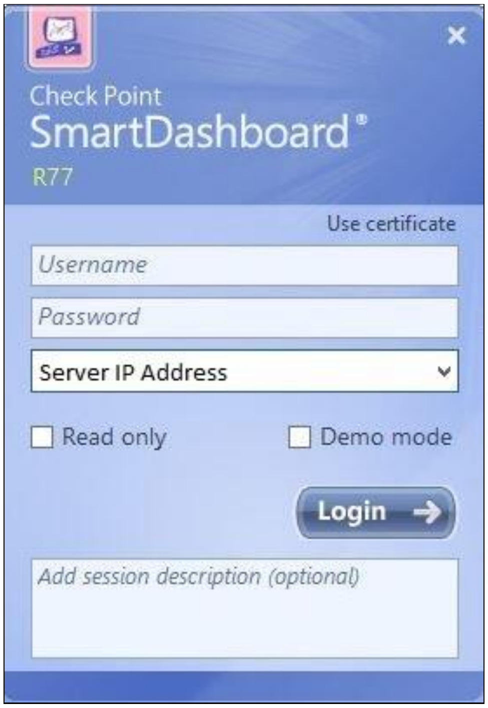
- Creating a User and Issuing a Registration Key, page 8
- Creating a User Group, page 12
- Enabling Authentication for the VPN Client, page 13
- Configuring a Firewall Rule for the VPN Client, page 14
- Installing a Policy, page 17
- Enrolling a Certificate, page 18

Creating a User and Issuing a Registration Key

A user is created with a defined authentication scheme to log in to the Check Point Endpoint Security VPN Client and access its applications. Then, the administrator initiates the certificate process on the Security Management server (or ICA management tool), and is given a registration key.

1. Open the **Check Point SmartDashboard R77**.
2. On the login window, complete the following fields, and then click **Login**.

Username	Enter your user name.
Password	Enter your password.
Server Name or **Server IP Address**	Select the name or IP address of the server where Check Point Security Gateway is hosted.
Read only	Clear this option.



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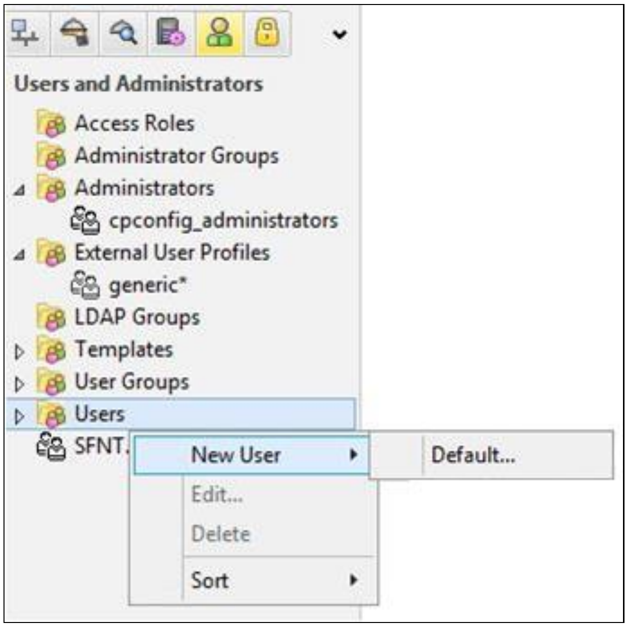
3. On the **Check Point SmartDashboard** main window, under **Users and Administrators**, right-click **Users** and then click **New User > Default**.



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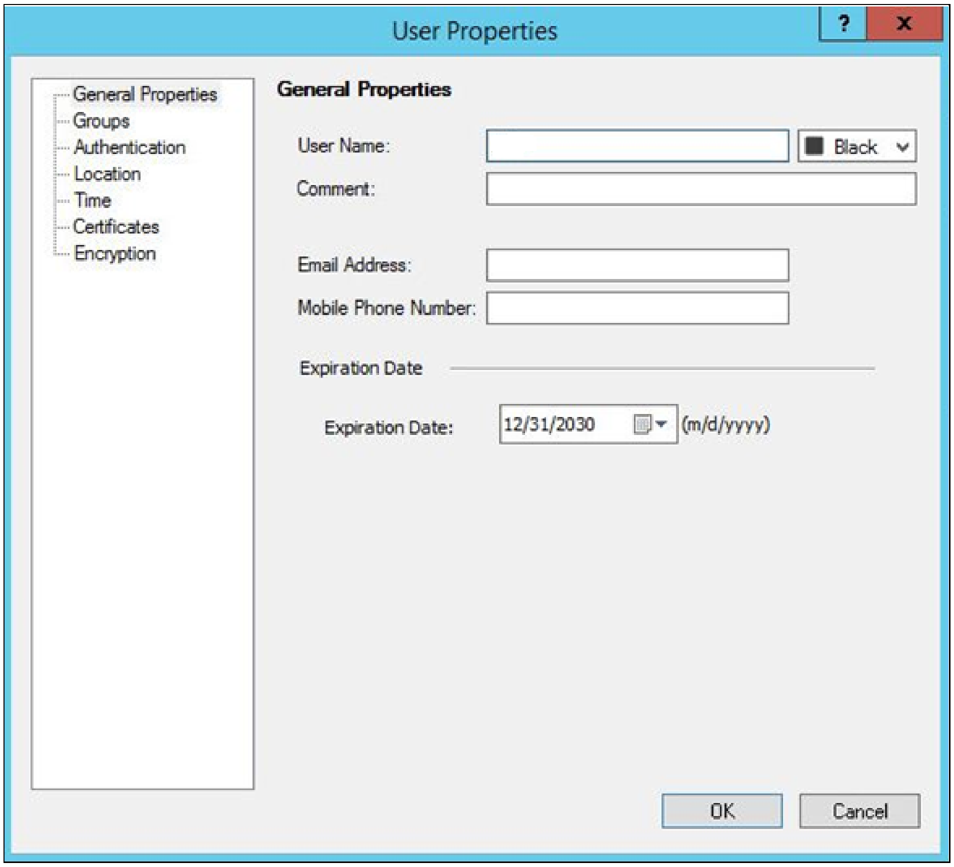
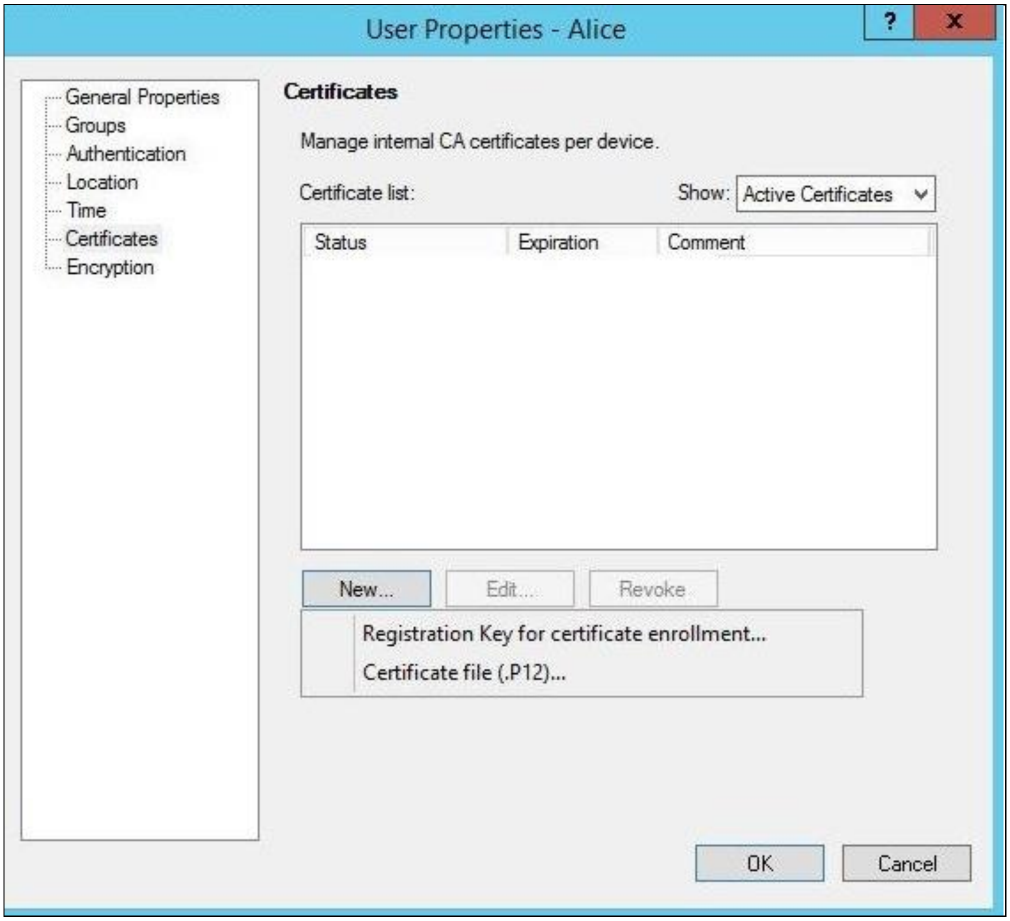
4. On the **User Properties** window, in the **User Name** field, enter the name of the user (for example, **Alice**).



(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

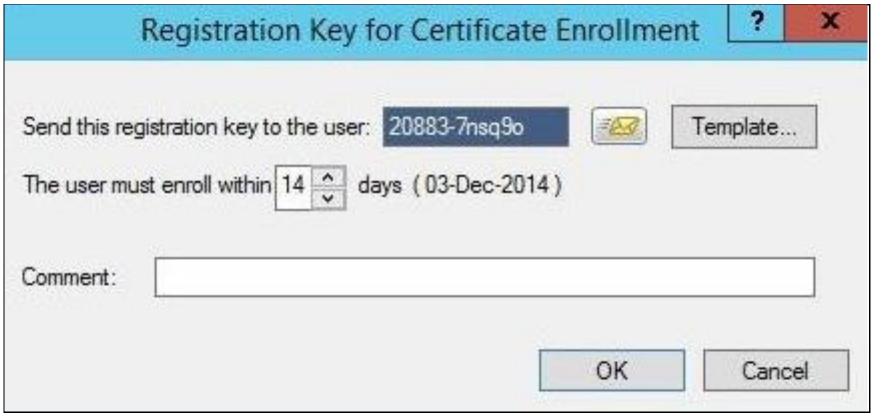
5. Click **Certificates**.



(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

6. Click **New**, and then select **Registration Key for certificate enrollment**.

7. On the **Registration Key for Certificate Enrollment** window, a registration key is displayed. Copy this registration key, save it (where you can retrieve it later for certificate enrollment), and then click **OK.**



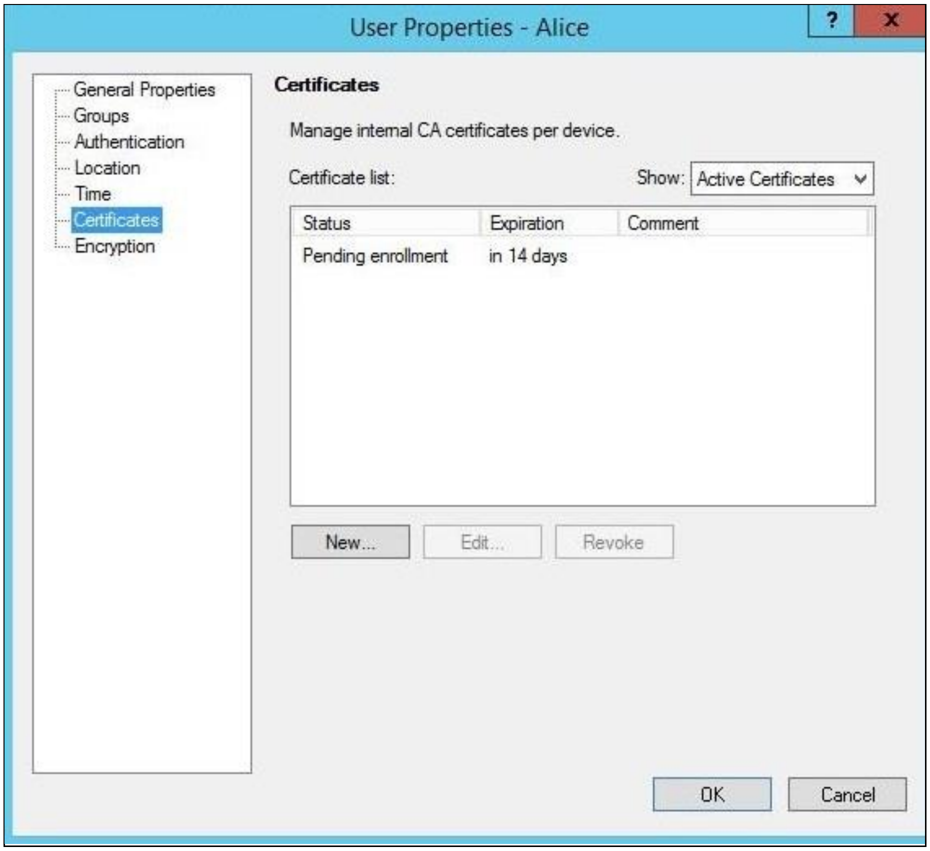
Send this registration key to the user: 20883-7nsq9o

The user must enroll within 14 days (03-Dec-2014)

Comment:

(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

8. On the **User Properties** window, in the **Certificate list**, a **Pending enrollment** certificate status is added. Click **OK**.



User Properties - Alice

Certificates

Manage internal CA certificates per device.

Certificate list:

Show: Active Certificates

Status	Expiration	Comment
Pending enrollment	in 14 days	

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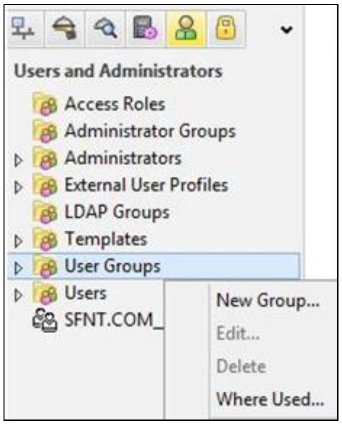
Creating a User Group

A user group is a set of users who have related responsibilities or perform related tasks. Similar to individual users, user groups can be specified in policy rules.

NOTE: Creating a group enables you to allow some of your users to perform some tasks, but not others. Firewalls do not allow you to define rules for individual users, but you can define rules for groups.

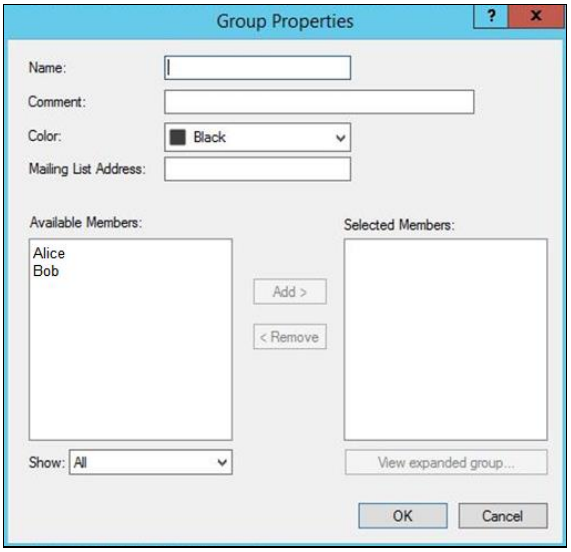
1. On the **Check Point SmartDashboard** main window, under **Users and Administrators**, right-click **User Groups**, and then click **New Group**.



(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

2. On the **Group Properties** window, complete the following fields, and then click **OK**.

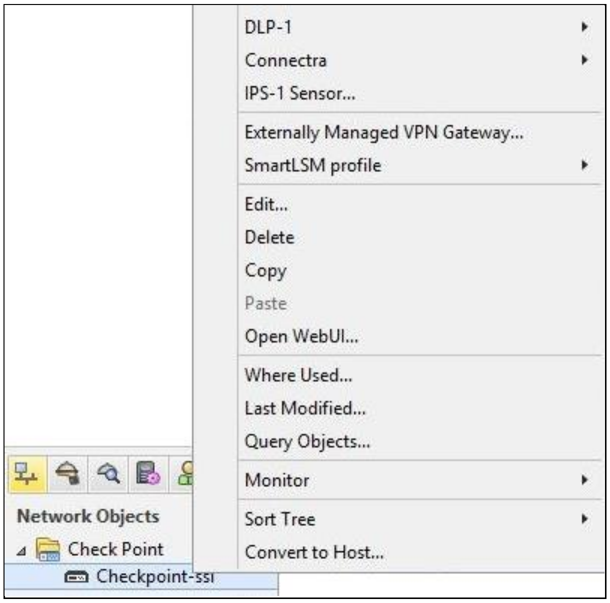
Name	Enter the name of the group (for example, **Remote_access_group)**.
Available Members/Selected Members	In the **Available Members** list, select the members to add to the group, and then click **Add.** These members are moved to the **Selected Members** list.



(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

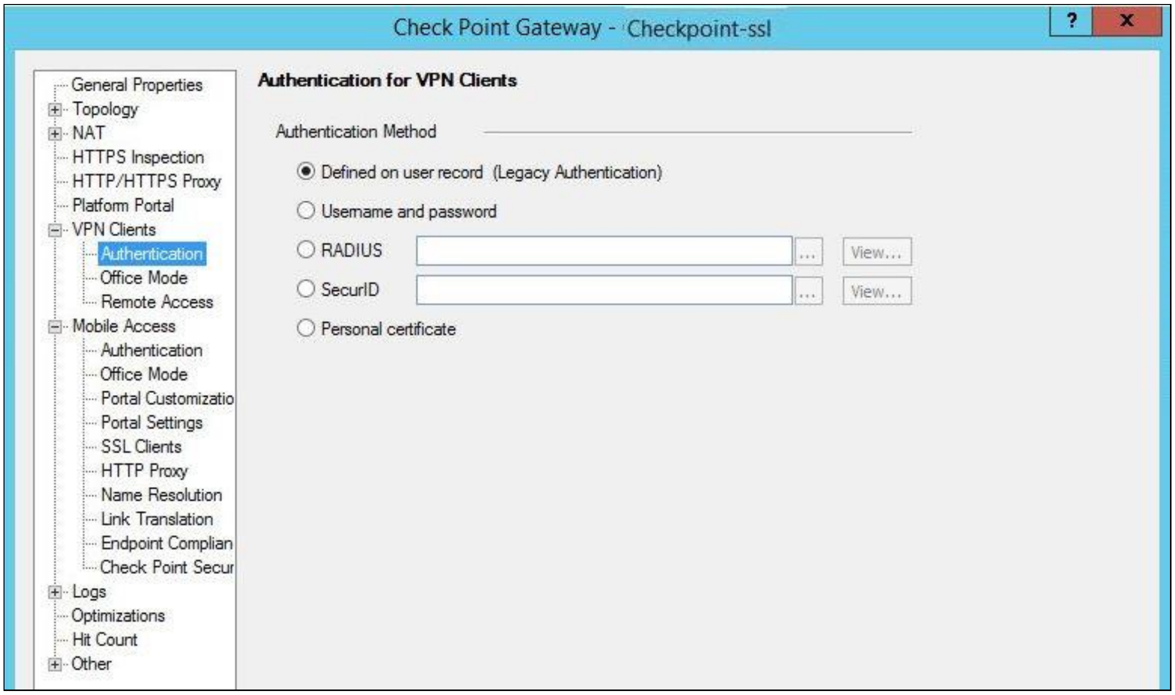
Enabling Authentication for the VPN Client

1. On the **Check Point SmartDashboard** main window, under **Network Objects**, expand **Check Point**, right-click your device (for example, **Checkpoint-ssl**), and then click **Edit**.



(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

2. On the **Check Point Gateway – Checkpoint-ssl** window, expand **VPN Clients**, and then click **Authentication**.



Authentication for VPN Clients

Authentication Method

● Defined on user record (Legacy Authentication)

○ Username and password

○ RADIUS

○ SecurID

○ Personal certificate

(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

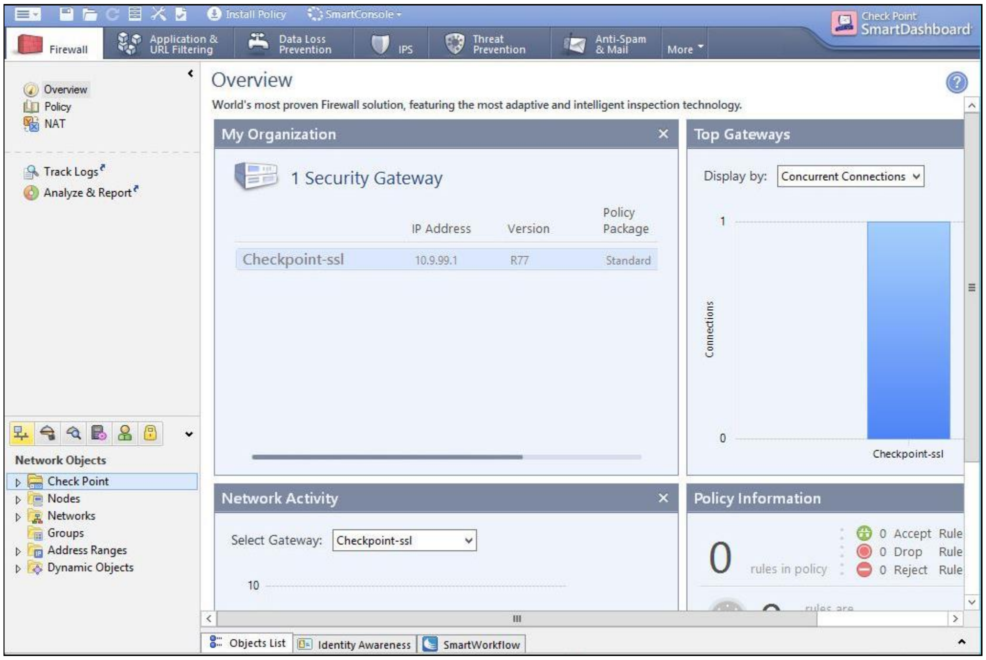
3. Under **Authentication Method**, select **Defined on user record (Legacy Authentication)**, and then click **OK**.

Configuring a Firewall Rule for the VPN Client

A security gateway object has at least one firewall blade installed that serves as an entry point to the corporate network.

The firewall rule is a policy definition of what is allowed and what is blocked by the firewall. Rules are based on the concept of objects. For example, networks objects can be used in the source and destination of rules.

1. On the **Check Point SmartDashboard** main window, click the **Firewall** tab.



Overview

World's most proven Firewall solution, featuring the most adaptive and intelligent inspection technology.

My Organization: 1 Security Gateway

	IP Address	Version	Policy Package
Checkpoint-ssl	10.9.99.1	R77	Standard

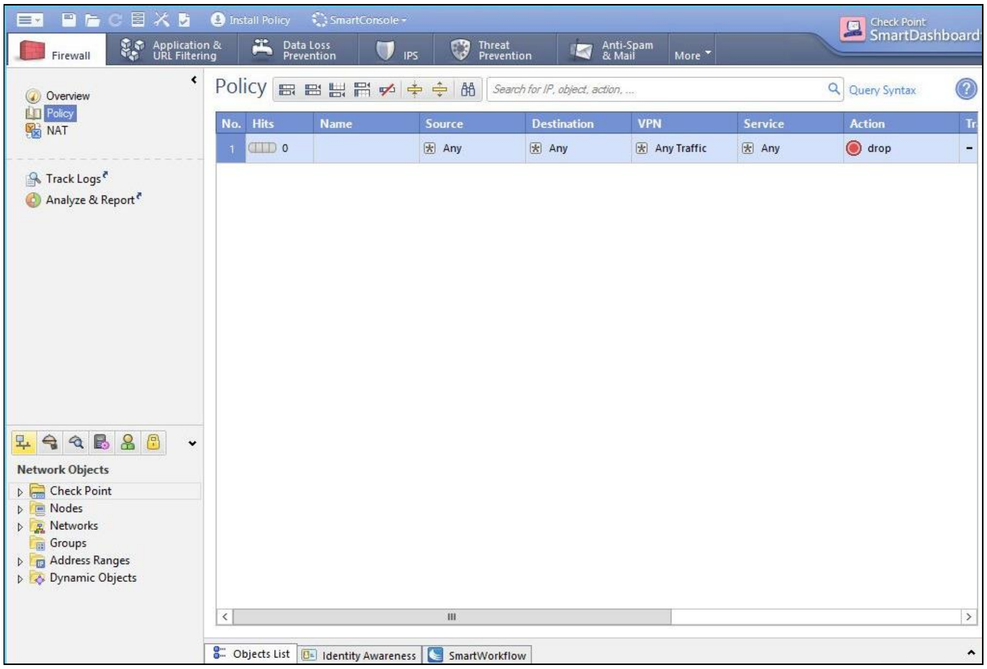
Top Gateways — Display by: Concurrent Connections

Network Activity — Select Gateway: Checkpoint-ssl

Policy Information: 0 rules in policy — 0 Accept Rule, 0 Drop Rule, 0 Reject Rule

(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

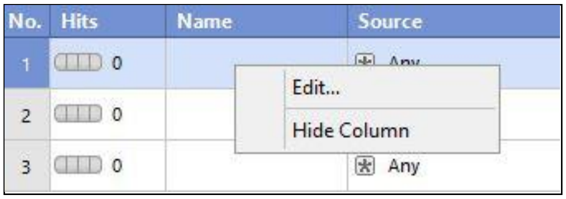
2. Click **Policy**, and then click the **Add rule at bottom** icon. A row is added below the **Policy** icon bar.



No.	Hits	Name	Source	Destination	VPN	Service	Action	Tr
1	0		Any	Any	Any Traffic	Any	drop	-

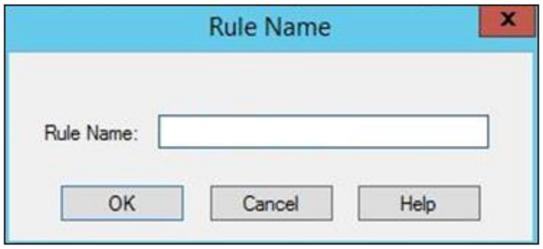
(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

3. In the **Name** column, right-click the new row, and then click **Edit**.



(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

4. On the **Rule Name** window, in the **Rule Name** field, add a name for the firewall rule, and then click **OK**.



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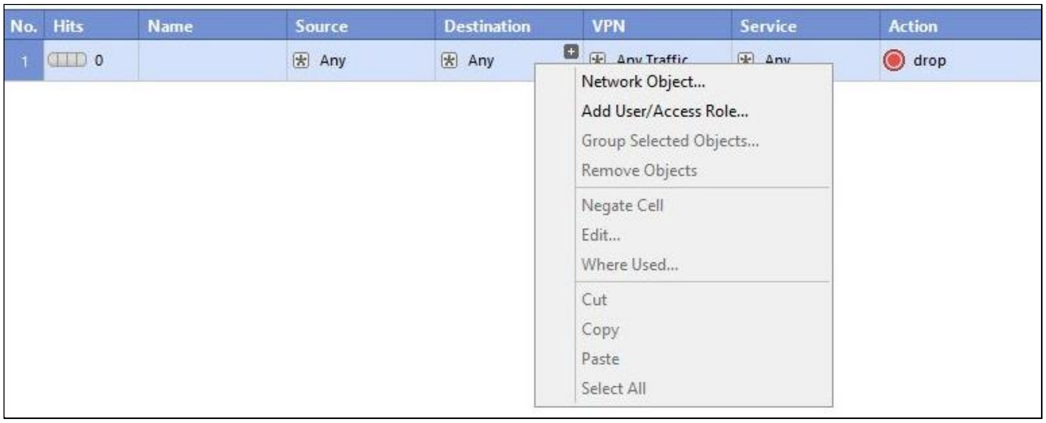
5. In the **Destination** column, right-click the new row, and then click **Network Object**.



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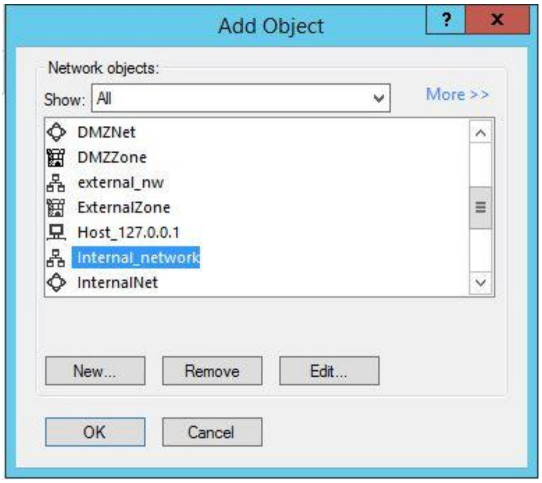
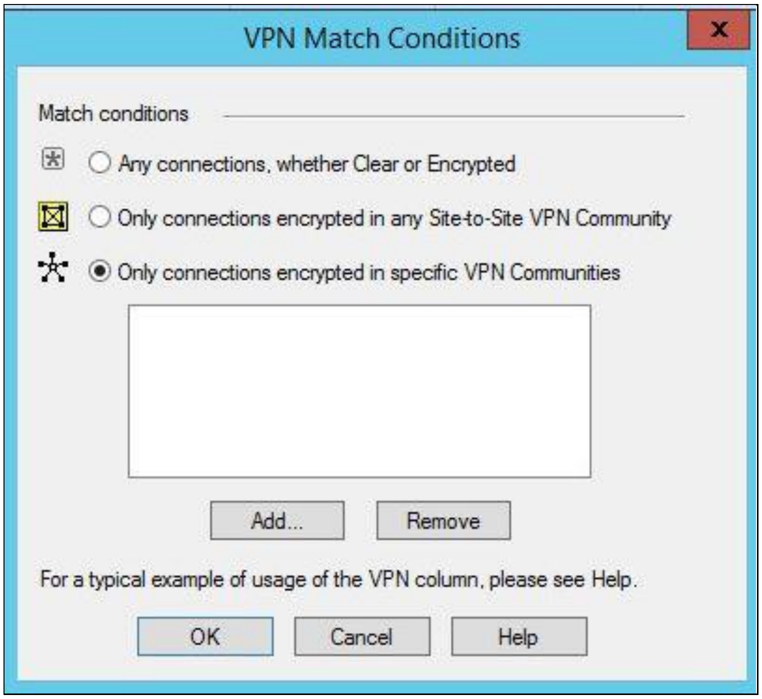
6. On the **Add Object** window, select **Internal_network**, and then click **OK**. **Internal_network** is an alias for the corporate network in an organization.



(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

7. In the **VPN** column, right-click the new row, and then click **Edit Cell**.
8. On the **VPN Match Conditions** window, perform the following steps, and then click **OK**:
   a. Select **Only connections encrypted in specific VPN communities**, and then click **Add**.



VPN Match Conditions

Match conditions

○ Any connections, whether Clear or Encrypted

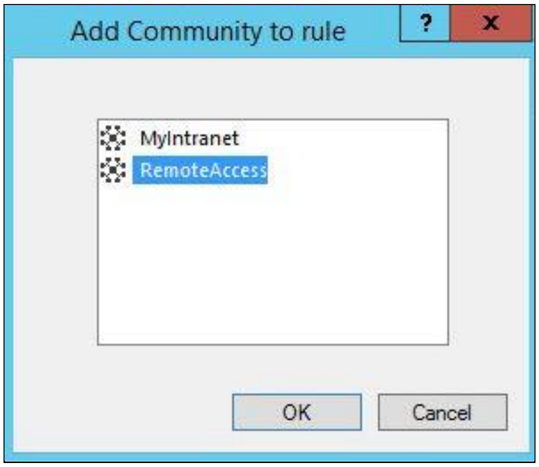
○ Only connections encrypted in any Site-to-Site VPN Community

● Only connections encrypted in specific VPN Communities

For a typical example of usage of the VPN column, please see Help.

(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

   b. In the **Add Community to rule** window, select **RemoteAccess**, and then click **OK**.



Add Community to rule

MyIntranet

RemoteAccess

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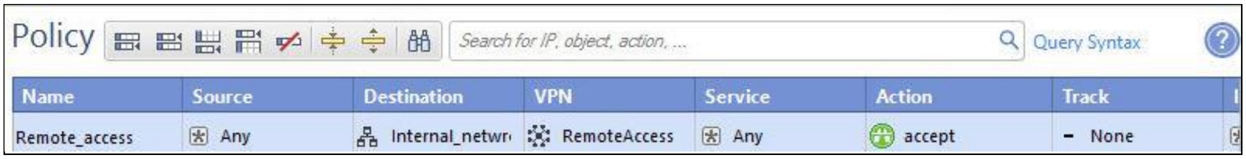
The new policy is created.



Policy

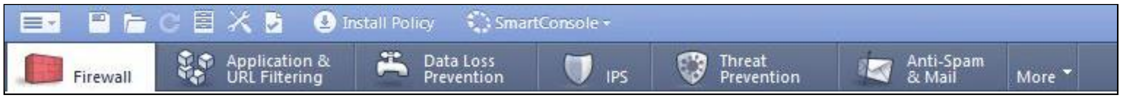
Name	Source	Destination	VPN	Service	Action	Track	I
Remote_access	Any	Internal_netwr	RemoteAccess	Any	accept	- None	

Installing a Policy

The policy installation process does the following:

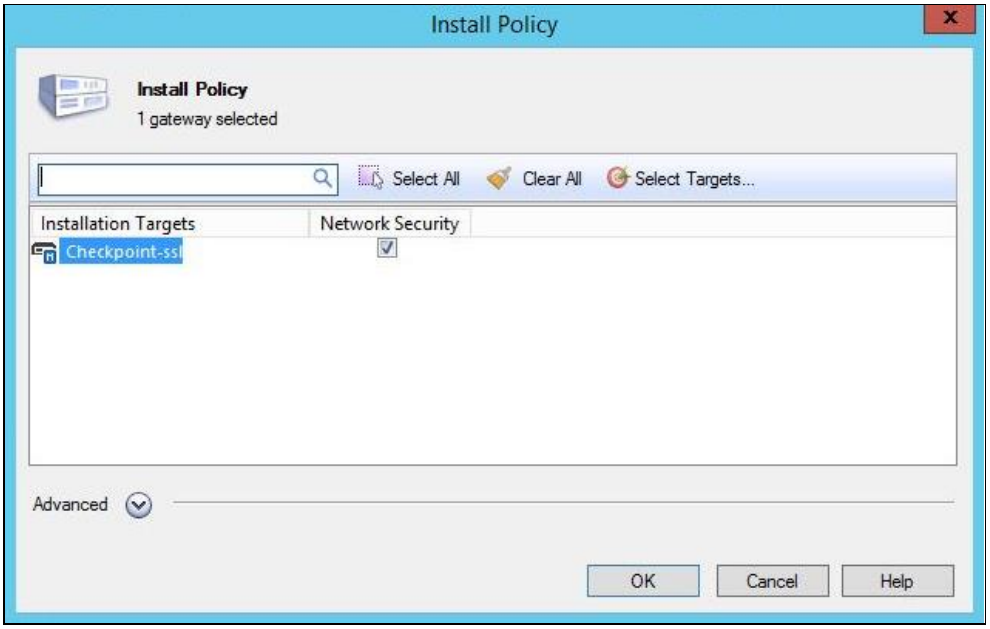
- Performs a heuristic verification on rules to ensure they are consistent, and that no rule is redundant.
- Confirms that each of the Security Gateways on which the rule is enforced (known as Install On object) enforces at least one of the rules.
- Converts the Security Policy into an Inspection Script, and compiles this script into an Inspection Code.
- Distributes Inspection Codes to the selected installation targets.

1. On the **Check Point SmartDashboard** main window, in the icon bar at the top, click **Install Policy**.



(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

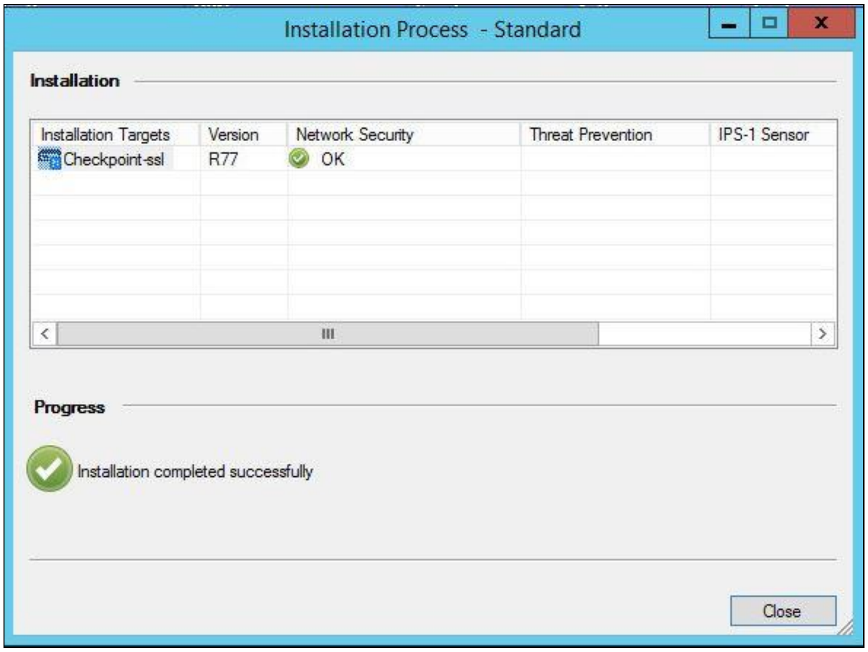
2. On the **Install Policy** window, in the **Network Security** column, select the option for your device (for example, **Checkpoint-ssl**), and then click **OK**.



Installation Targets	Network Security
Checkpoint-ssl	☑

(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

3. When the installation is complete, click **Close**.



Installation Targets	Version	Network Security	Threat Prevention	IPS-1 Sensor
Checkpoint-ssl	R77	OK		

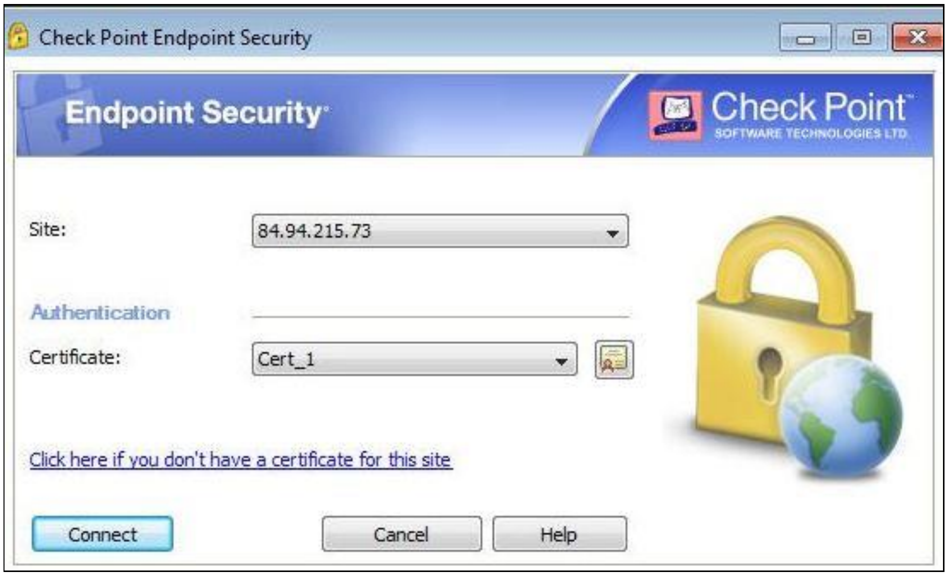
Installation completed successfully

(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

Enrolling a Certificate

The client establishes an SSL connection to the Check Point's Internal Certificate Authority (ICA) and completes the certificate generation process using the registration key. When you enroll a certificate with Endpoint Security for the first time, provide the registration key and enroll a certificate in the token.

1. Insert the SafeNet eToken first into your USB slot, and then open the **Check Point Endpoint Security** application.
2. The IP address in the **Site** field is same one that was configured during the installation. Also during the installation, **Certificate** was the selected **Authentication** option. Click the **Click here if you don't have a certificate for this site** link.


Check Point Endpoint Security
Endpoint Security
Check Point
SOFTWARE TECHNOLOGIES LTD

Site: 84.94.215.73

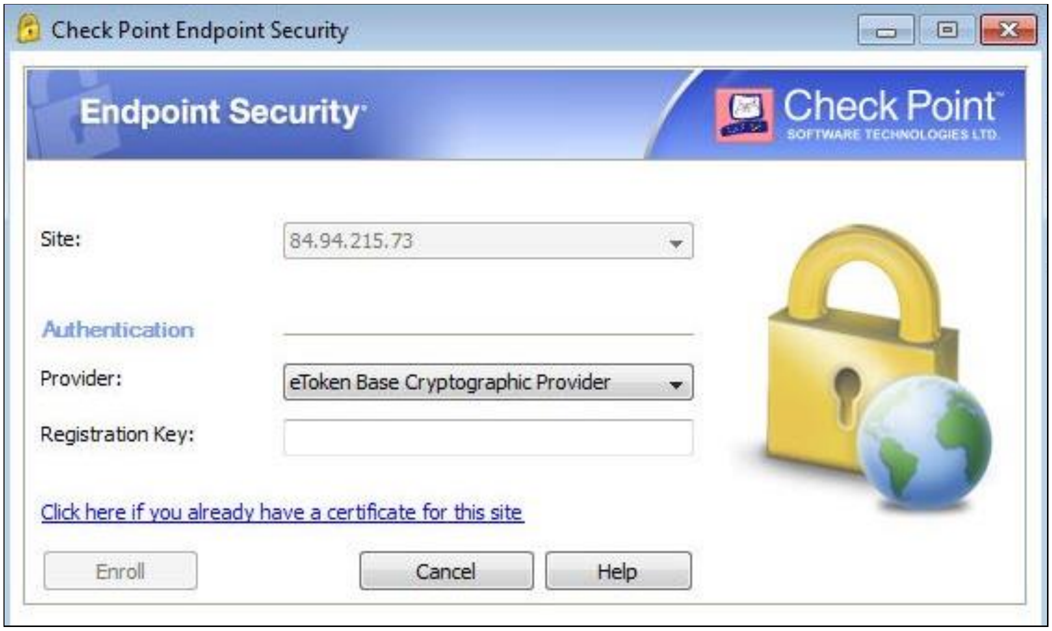
Authentication

Certificate: Cert_1

Click here if you don't have a certificate for this site
Connect
Cancel
Help

(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

3. In the **Provider** field, select **eToken Base Cryptographic Provider**.



Check Point Endpoint Security
Endpoint Security
Check Point SOFTWARE TECHNOLOGIES LTD.

Site: 84.94.215.73

Authentication

Provider: eToken Base Cryptographic Provider

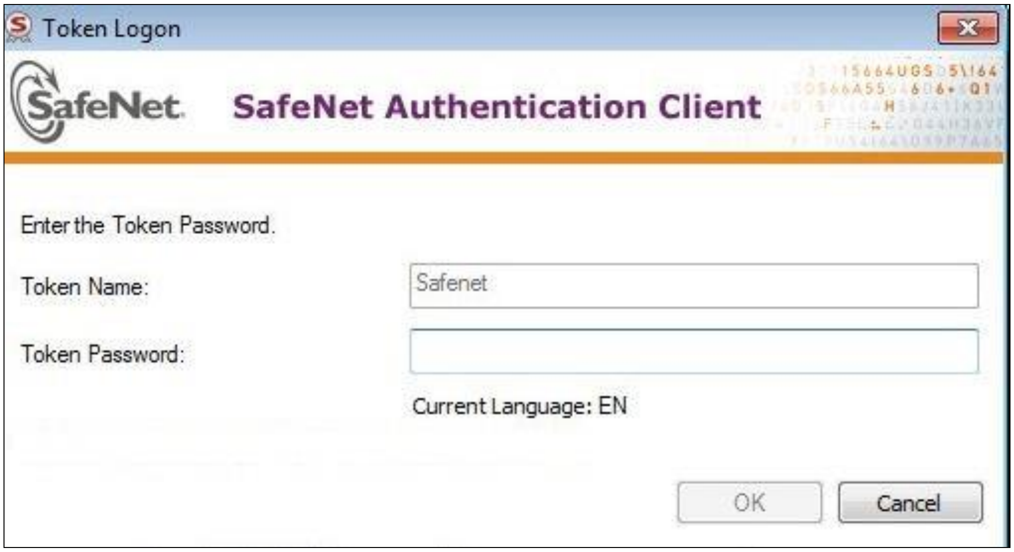
Registration Key:

Click here if you already have a certificate for this site
Enroll
Cancel
Help

(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

4. In the **Registration Key** field, enter the registration key that you saved in step 7 of “Creating a User” on page 8, and then click **Enroll**.

5. On the **Token Logon** window, in the **Token Password** field, enter your SafeNet eToken password, and then click **OK**.



Enter the Token Password.

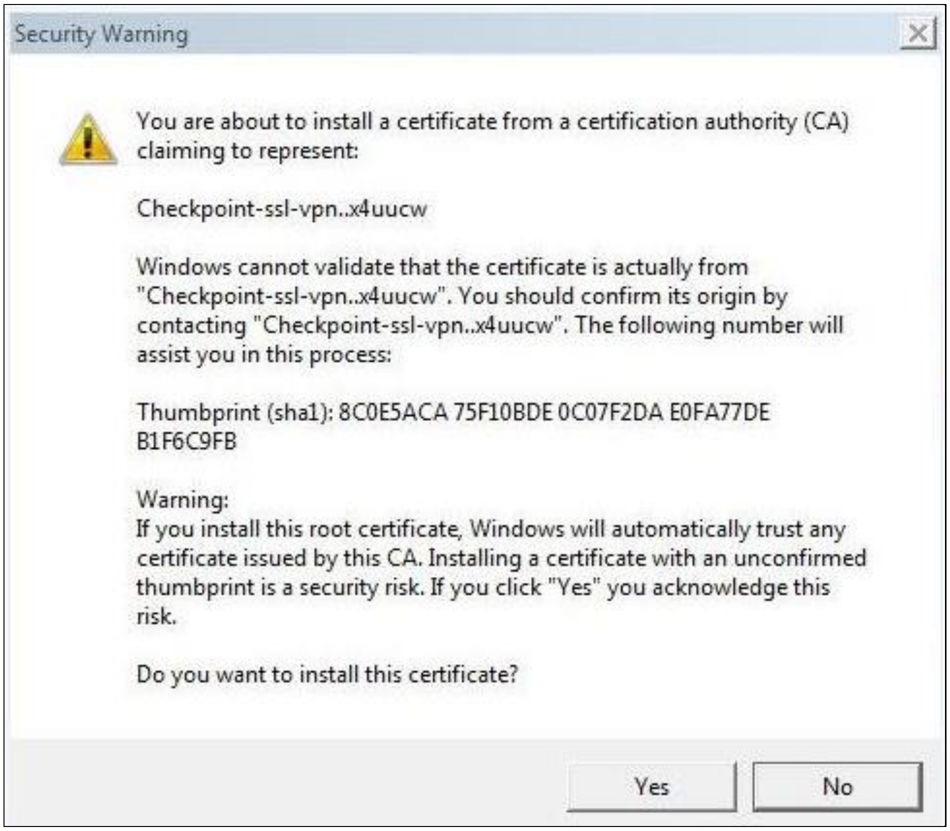
Token Name: Safenet

Token Password:

Current Language: EN

6. A security warning message is displayed. Click **Yes**.

   This is the certificate offered by Check Point's Internal Certificate Authority (ICA).



Security Warning

You are about to install a certificate from a certification authority (CA) claiming to represent:

Checkpoint-ssl-vpn..x4uucw

Windows cannot validate that the certificate is actually from "Checkpoint-ssl-vpn..x4uucw". You should confirm its origin by contacting "Checkpoint-ssl-vpn..x4uucw". The following number will assist you in this process:

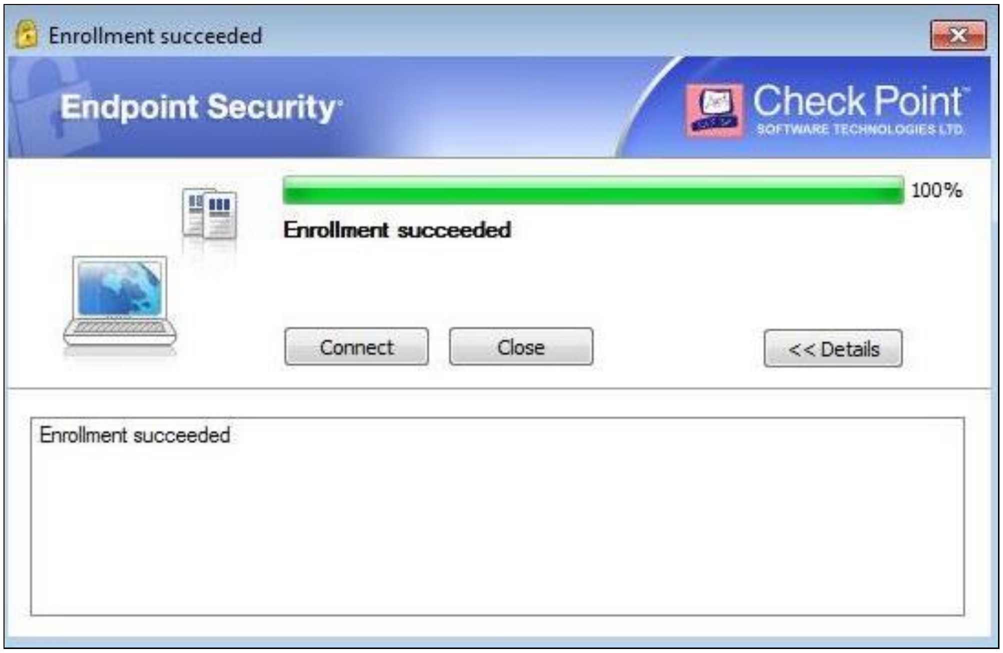
Thumbprint (sha1): 8C0E5ACA 75F10BDE 0C07F2DA E0FA77DE B1F6C9FB

Warning:
If you install this root certificate, Windows will automatically trust any certificate issued by this CA. Installing a certificate with an unconfirmed thumbprint is a security risk. If you click "Yes" you acknowledge this risk.

Do you want to install this certificate?

(The screen image above is from Microsoft® software. Trademarks are the property of their respective owners.)

7. When enrollment is complete, click **Close**.



Enrollment succeeded

Enrollment succeeded

Enrollment succeeded

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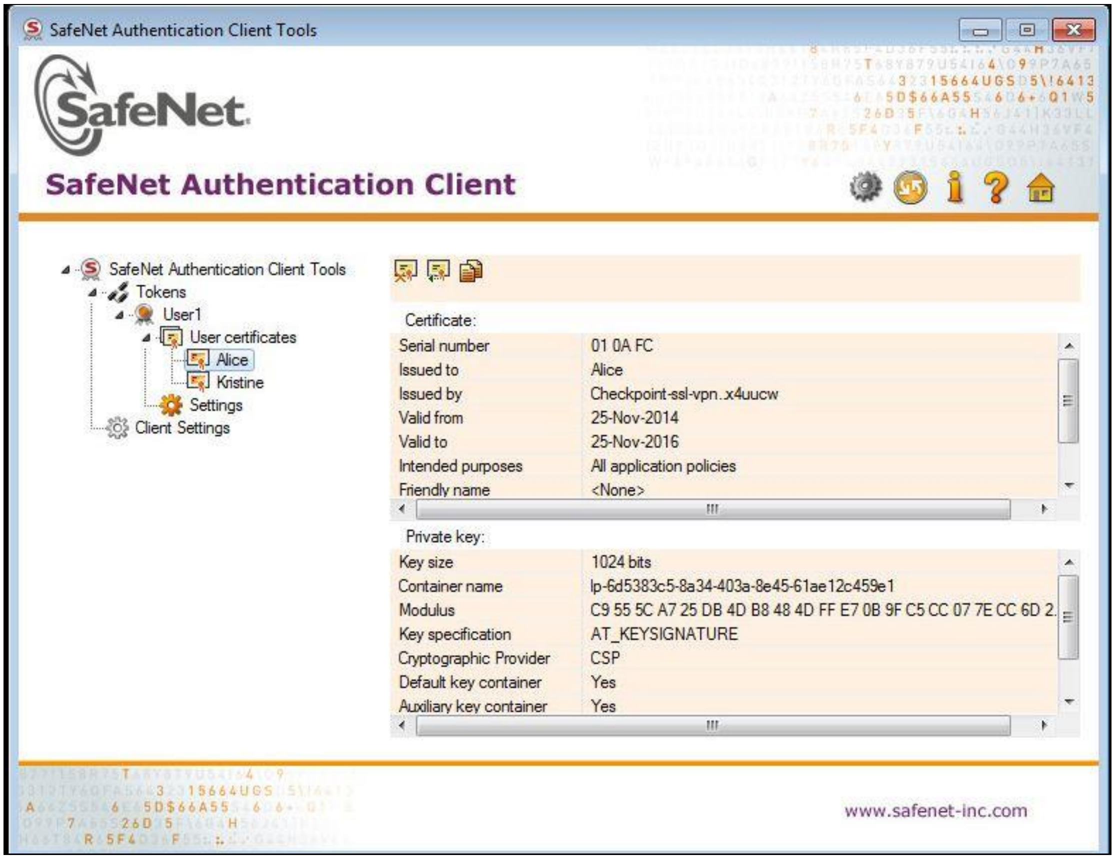
8. Open the **SafeNet Authentication Client** tools application and verify that the certificate is issued to the user you specified (for example, **Alice**).


SafeNet Authentication Client Tools
SafeNet
SafeNet Authentication Client
SafeNet Authentication Client Tools
Tokens
User1
User certificates
Alice
Kristine
Settings
Client Settings
www.safenet-inc.com

Certificate:

Serial number	01 0A FC
Issued to	Alice
Issued by	Checkpoint-ssl-vpn..x4uucw
Valid from	25-Nov-2014
Valid to	25-Nov-2016
Intended purposes	All application policies
Friendly name	<None>

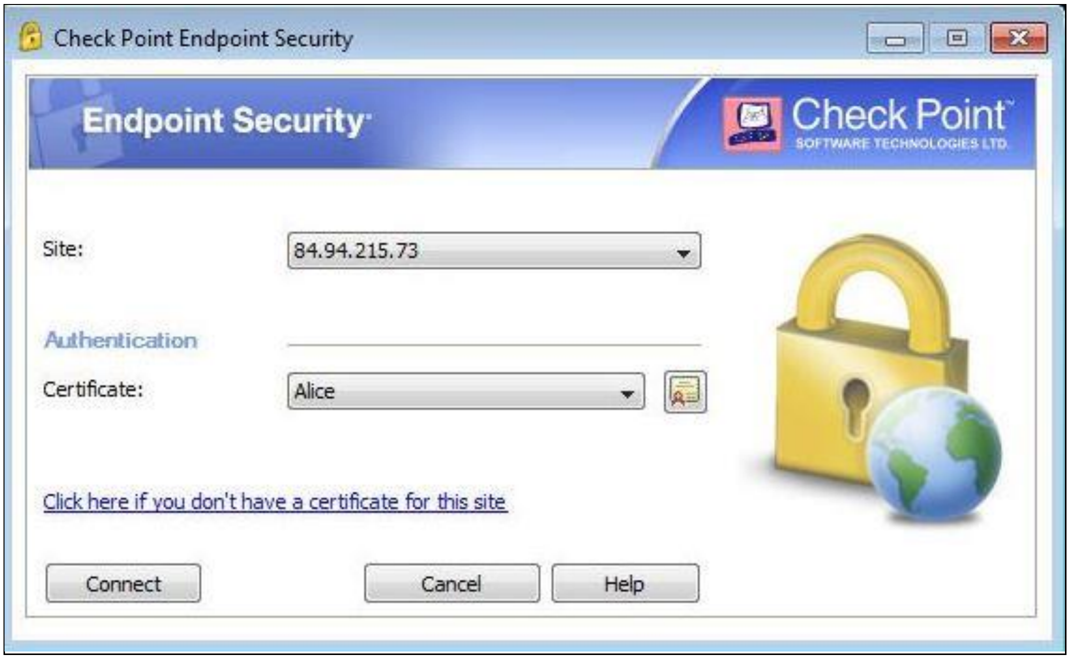
Private key:

Key size	1024 bits
Container name	lp-6d5383c5-8a34-403a-8e45-61ae12c459e1
Modulus	C9 55 5C A7 25 DB 4D B8 48 4D FF E7 0B 9F C5 CC 07 7E CC 6D 2.
Key specification	AT_KEYSIGNATURE
Cryptographic Provider	CSP
Default key container	Yes
Auxiliary key container	Yes

Running the Solution

1. Open the **Check Point Endpoint Security** application.

2. Insert the SafeNet eToken into your USB slot. The certificate on the eToken is propagated in the **Certificate** field. Click **Connect**.



Check Point Endpoint Security

Site: 84.94.215.73

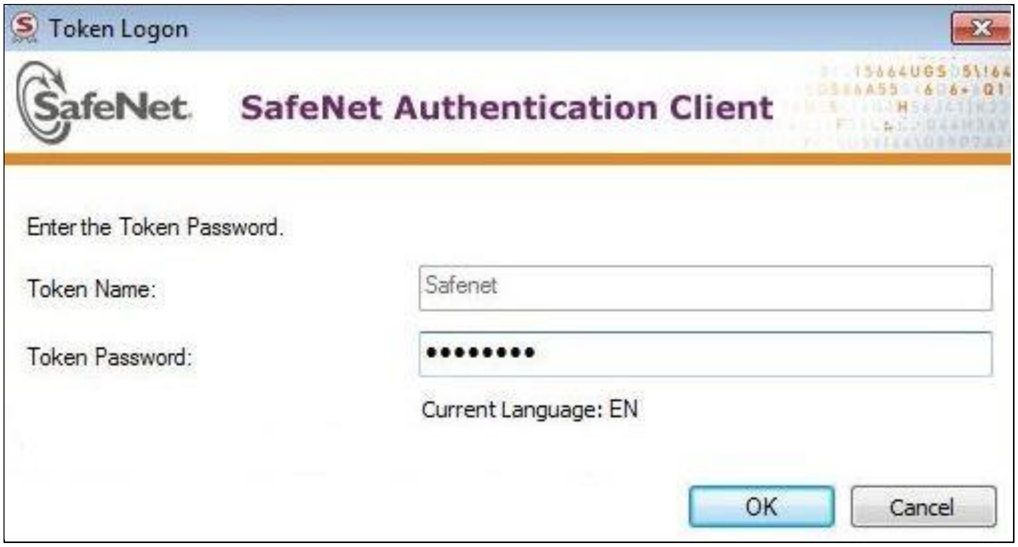
Authentication

Certificate: Alice

Click here if you don't have a certificate for this site

(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

3. On the **Token Logon** window, in the **Token Password** field, enter your Token password, and then click **OK**.



Token Logon

SafeNet Authentication Client

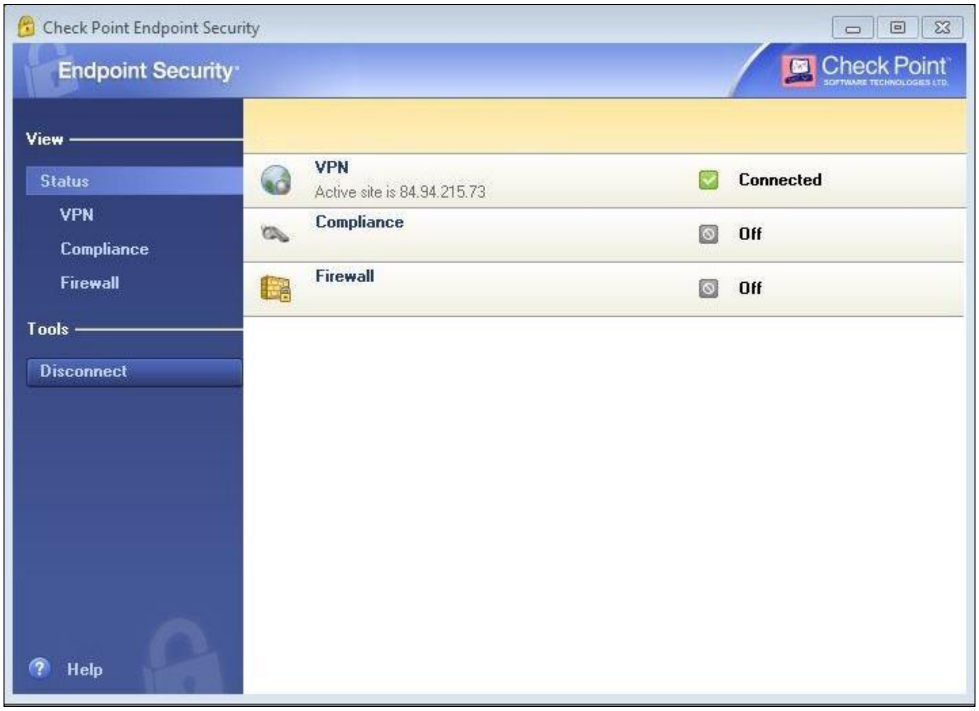
Enter the Token Password.

Token Name: Safenet

Token Password: •••••••••

Current Language: EN

4. On the right side of the task bar, click on the VPN client process to see the VPN connection status. When the authentication succeeds, the VPN connection status is shown as **Connected**.



VPN Active site is 84.94.215.73	Connected
Compliance	Off
Firewall	Off

(The screen image above is from Check Point® software. Trademarks are the property of their respective owners.)

Support Contacts

If you encounter a problem while installing, registering, or operating this product, please make sure that you have read the documentation. If you cannot resolve the issue, contact your supplier or SafeNet Customer Support. SafeNet Customer Support operates 24 hours a day, 7 days a week. Your level of access to this service is governed by the support plan arrangements made between SafeNet and your organization. Please consult this support plan for further information about your entitlements, including the hours when telephone support is available to you.

Contact Method	Contact Information	
Address	SafeNet, Inc. 4690 Millennium Drive Belcamp, Maryland 21017 USA	
Phone	United States	1-800-545-6608
	International	1-410-931-7520
Technical Support Customer Portal	https://serviceportal.safenet-inc.com Existing customers with a Technical Support Customer Portal account can log in to manage incidents, get the latest software upgrades, and access the SafeNet Knowledge Base.	