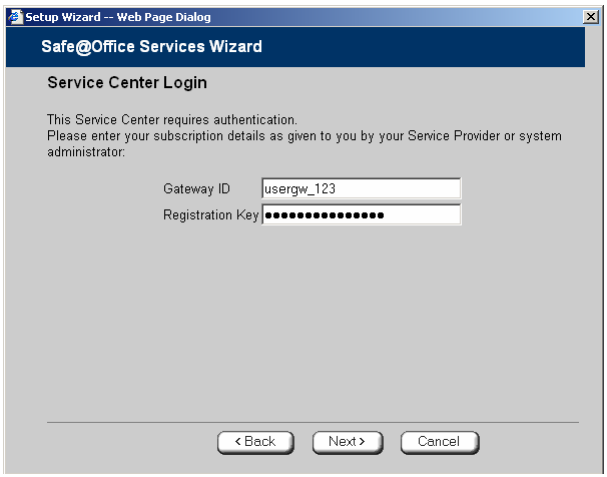
The Safe@Office Services Wizard opens, with the Service Center dialog box displayed.

3. Make sure the Connect to a different Service Center check box is selected.
4. Do one of the following:
   - To connect to the SofaWare Service Center, choose usercenter.sofaware.com.
   - To specify a Service Center, choose Specified IP and then in the Specified IP field, enter the desired Service Center's IP address, as given to you by your system administrator.
5. Click Next.
   - The Connecting... screen appears.

- If the Service Center requires authentication, the Service Center Login dialog box appears.

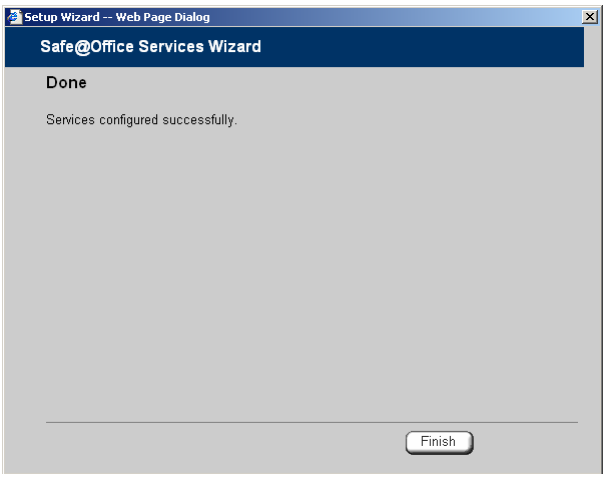


Enter your gateway ID and registration key in the appropriate fields, as given to you by your service provider, then click Next.

- The Connecting... screen appears.
- The Confirmation dialog box appears with a list of services to which you are subscribed.

6. Click Next.

   The Done screen appears with a success message.

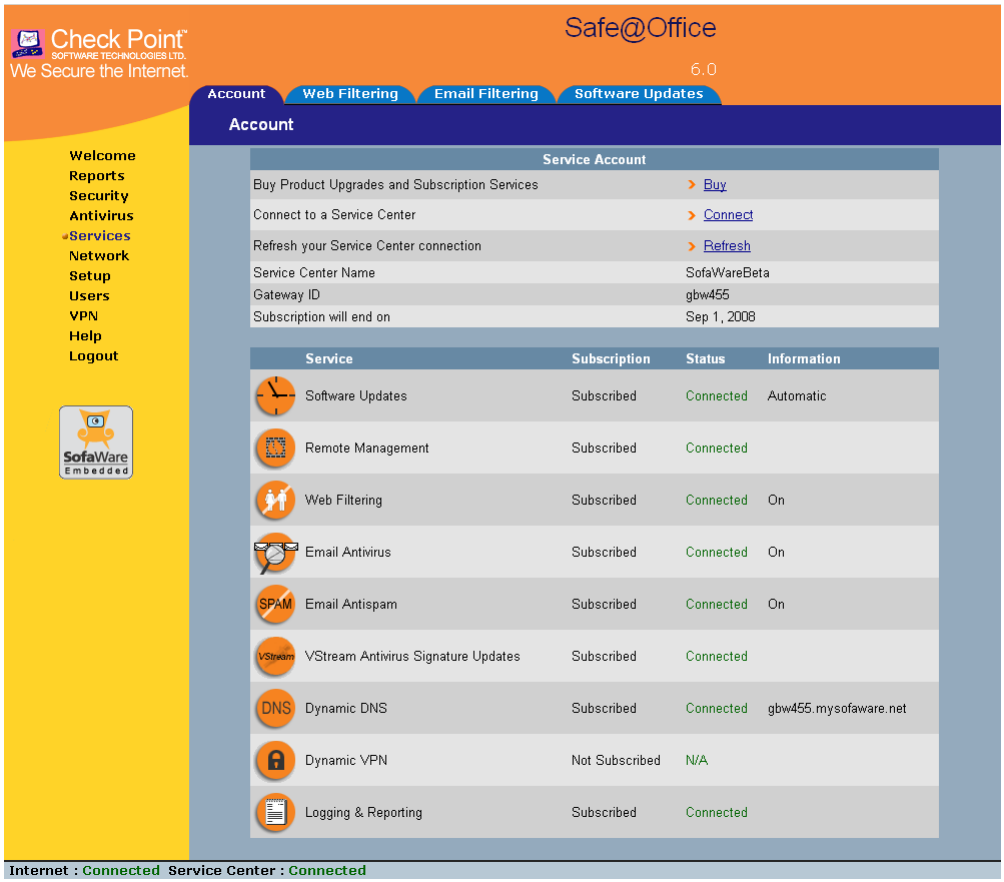


7. Click Finish.

   The following things happen:

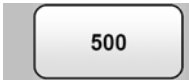
   - If a new firmware is available, the Safe@Office appliance may start downloading it. This may take several minutes. Once the download is complete, the Safe@Office appliance restarts using the new firmware.
   - The Welcome page appears.

- The services to which you are subscribed are now available on your Safe@Office appliance and listed as such on the Account page. See ***Viewing Services Information*** on page 289 for further information.



- The Services submenu includes the services to which you are subscribed.

Viewing Services Information



The Account page displays the following information about your subscription.

Table 62: Account Page Fields

This field…	Displays…
Service Center Name	The name of the Service Center to which you are connected (if known).
Gateway ID	Your gateway ID.
Subscription will end on	The date on which your subscription to services will end.
Service	The services available in your service plan.
Subscription	The status of your subscription to each service: • Subscribed • Not Subscribed
Status	The status of each service: • Connected. You are connected to the service through the Service Center. • Connecting. Connecting to the Service Center. • N/A. The service is not available.

This field...	Displays...
Information	The mode to which each service is set. If you are subscribed to Dynamic DNS, this field displays your gateway's domain name. For further information, see ***Web Filtering*** on page 292, ***Virus Scanning*** on page 296, and ***Automatic and Manual Updates*** on page 300.

Refreshing Your Service Center Connection

500

This option restarts your Safe@Office appliance's connection to the Service Center and refreshes your Safe@Office appliance's service settings.

To refresh your Service Center connection

1. Click Services in the main menu, and click the Account tab.

   The Account page appears.

2. In the Service Account area, click Refresh.

   The Safe@Office appliance reconnects to the Service Center.

   Your service settings are refreshed.

Configuring Your Account

500

This option allows you to access your Service Center's Web site, which may offer additional configuration options for your account. Contact your Service Center for a user ID and password.

To configure your account

1. Click Services in the main menu, and click the Account tab.

   The Account page appears.

2. In the Service Account area, click Configure.

Note: If no additional settings are available from your Service Center, this button will not appear.

   Your Service Center's Web site opens.

3. Follow the on-screen instructions.

Disconnecting from Your Service Center

If desired, you can disconnect from your Service Center.

To disconnect from your Service Center

1. Click Services in the main menu, and click the Account tab.

   The Account page appears.

2. In the Service Account area, click Connect.

   The Safe@Office Services Wizard opens, with the first Subscription Services dialog box displayed.

3. Clear the Connect to a different Service Center check box.
4. Click Next.

   The Done screen appears with a success message.

5. Click Finish.

   The following things happen:

   - You are disconnected from the Service Center.

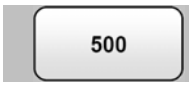
- The services to which you were subscribed are no longer available on your Safe@Office appliance.

Web Filtering

When the Web Filtering service is enabled, access to Web content is restricted according to the categories specified under Allow Categories. Authorized users will be able to view Web pages with no restrictions, only after they have provided the administrator password via the Web Filtering pop-up window.

Note: Web Filtering is only available if you are connected to a Service Center and subscribed to this service.

Enabling/Disabling Web Filtering



Note: If you are remotely managed, contact your Service Center to change these settings.

To enable/disable Web Filtering

1. Click Services in the main menu, and click the Web Filtering tab.

The Web Filtering page appears.

2. Drag the On/Off lever upwards or downwards.

   Web Filtering is enabled/disabled.

Selecting Categories for Blocking

500

You can define which types of Web sites should be considered appropriate for your family or office members, by selecting the categories. Categories marked with ✅ will remain visible, while categories marked with ❌ will be blocked and will require the administrator password for viewing.

Note: If you are remotely managed, contact your Service Center to change these settings.

To allow/block a category

- In the Allow Categories area, click or next to the desired category.

Temporarily Disabling Web Filtering

If desired, you can temporarily disable the Web Filtering service.

To temporarily disable Web Filtering

1. Click Services in the main menu, and click the Web Filtering tab.

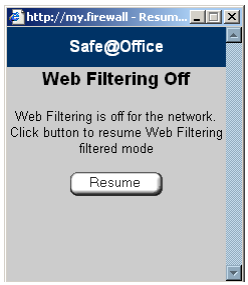
   The Web Filtering page appears.

2. Click Snooze.

   - Web Filtering is temporarily disabled for all internal network computers.

- The Snooze button changes to Resume.

- The Web Filtering Off popup window opens.



3. To re-enable the service, click Resume, either in the popup window, or on the Web Filtering page.

   - The service is re-enabled for all internal network computers.
   - If you clicked Resume in the Web Filtering page, the button changes to Snooze.

- If you clicked Resume in the Web Filtering Off popup window, the popup window closes.

Email Filtering

There are two Email Filtering services:

- Email Antivirus

  When the Email Antivirus service is enabled, your email is automatically scanned for the detection and elimination of all known viruses and vandals. If a virus is detected, it is removed and replaced with a warning message.

Note: The Email Antivirus subscription service differs from VStream Antivirus in the following ways:

- Email Antivirus is centralized, redirecting traffic through the Service Center for scanning, while VStream Antivirus scans for viruses in the Safe@Office gateway itself.
- Email Antivirus is specific to email, scanning incoming POP3 and outgoing SMTP connections only, while VStream Antivirus supports additional protocols, including incoming SMTP and outgoing POP3 connections.

You can use either antivirus solution or both in conjunction. For information on VStream Antivirus, see ***Using VStream Antivirus*** on page 265.

- Email Antispam

  When the Email Antispam service is enabled, your email is automatically scanned for the detection of spam. If spam is detected, the email's Subject line is modified to indicate that it is suspected spam. You can create rules to divert such messages to a special folder.

Note: Email Filtering services are only available if you are connected to a Service Center and subscribed to the services.

Enabling/Disabling Email Filtering

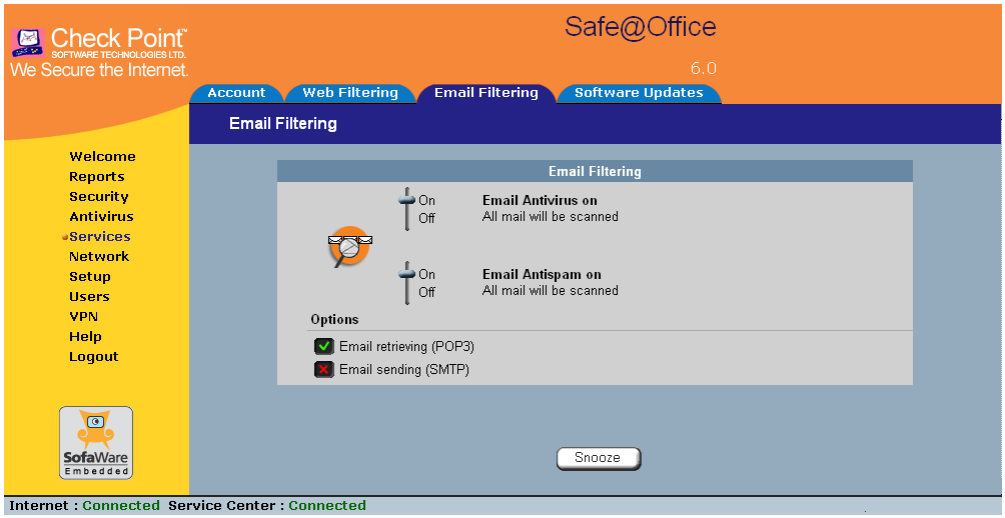
500

Note: If you are remotely managed, contact your Service Center to change these settings.

To enable/disable Email Filtering

1. Click Services in the main menu, and click the Email Filtering tab.

   The Email Filtering page appears.



2. Next to Email Antivirus, drag the On/Off lever upwards or downwards.

   Email Antivirus is enabled/disabled.

3. Next to Email Antispam, drag the On/Off lever upwards or downwards.

   Email Antispam is enabled/disabled.

Selecting Protocols for Scanning

500

If you are locally managed, you can define which protocols should be scanned for viruses and spam:

- Email retrieving (POP3). If enabled, all incoming email in the POP3 protocol will be scanned.
- Email sending (SMTP). If enabled, all outgoing email will be scanned.

Protocols marked with ✔ will be scanned, while those marked with ✘ will not.

Note: If you are remotely managed, contact your Service Center to change these settings.

To enable virus and spam scanning for a protocol

- In the Options area, click ✔ or ✘ next to the desired protocol.

Temporarily Disabling Email Filtering

500

If you are having problems sending or receiving email you can temporarily disable the Email Filtering services.

To temporarily disable Email Filtering

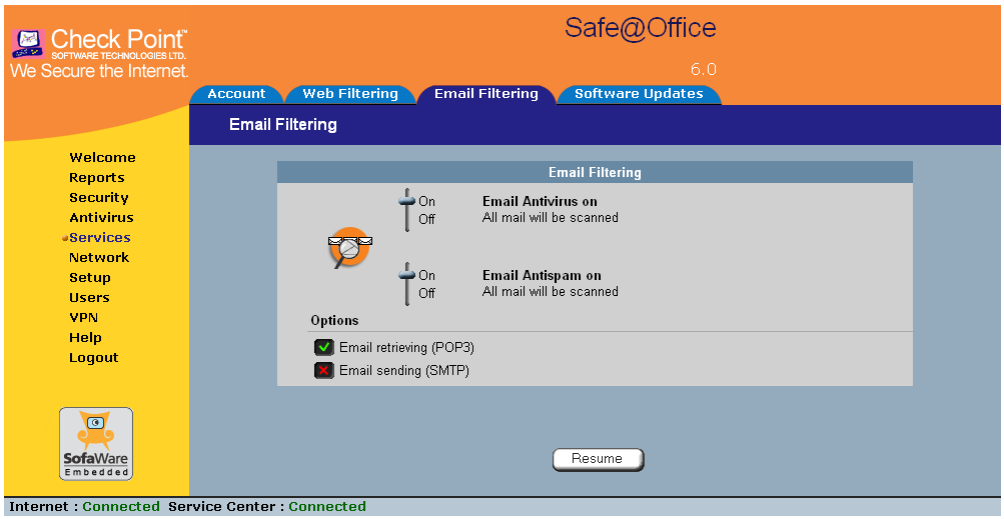
1. Click Services in the main menu, and click the Email Filtering tab.

   The Email Filtering page appears.

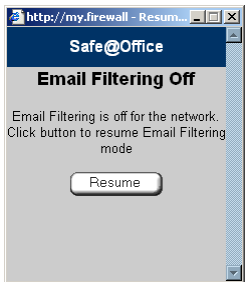
2. Click Snooze.

   - Email Antivirus and Email Antispam are temporarily disabled for all internal network computers.

- The Snooze button changes to Resume.



- The Email Filtering Off popup window opens.



3. To re-enable Email Antivirus and Email Antispam, click Resume, either in the popup window, or on the Email Filtering page.

   - The services are re-enabled for all internal network computers.
   - If you clicked Resume in the Email Filtering page, the button changes to Snooze.
   - If you clicked Resume in the Email Filtering Off popup window, the popup window closes.

Automatic and Manual Updates

The Software Updates service enables you to check for new security and software updates.

Note: Software Updates are only available if you are connected to a Service Center and subscribed to this service.

Checking for Software Updates when Remotely Managed

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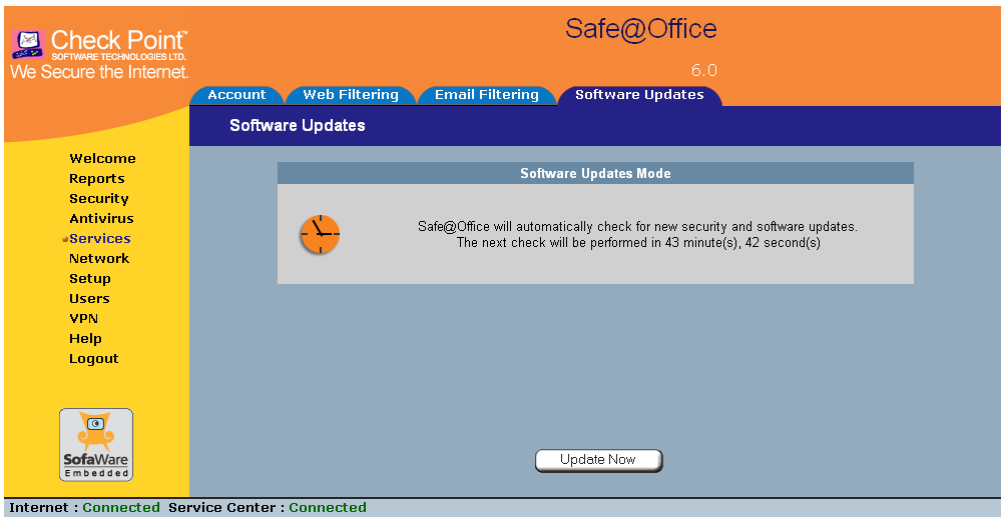
If your Safe@Office appliance is remotely managed, it automatically checks for software updates and installs them without user intervention. However, you can still check for updates manually, if needed.

To manually check for security and software updates

1. Click Services in the main menu, and click the Software Updates tab.

   The Software Updates page appears.



2. Click Update Now.

The system checks for new updates and installs them.

Checking for Software Updates when Locally Managed

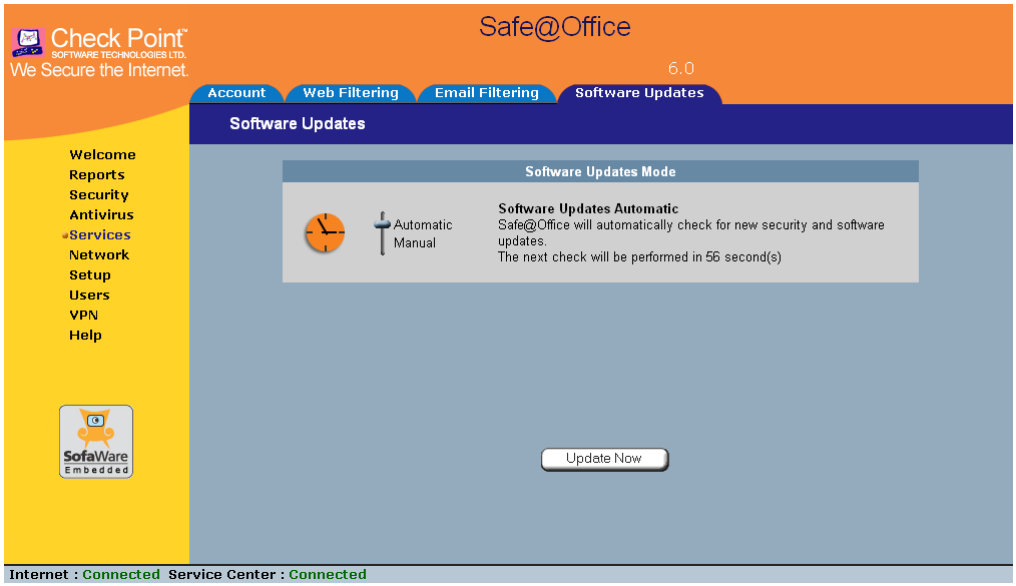
500

If your Safe@Office appliance is locally managed, you can set it to automatically check for software updates, or you can set it so that software updates must be checked for manually.

To configure software updates when locally managed

1. Click Services in the main menu, and click the Software Updates tab.

   The Software Updates page appears.



2. To set the Safe@Office appliance to automatically check for and install new software updates, drag the Automatic/Manual lever upwards.

   The Safe@Office appliance checks for new updates and installs them according to its schedule.

Note: When the Software Updates service is set to Automatic, you can still manually check for updates.

3. To set the Safe@Office appliance so that software updates must be checked for manually, drag the Automatic/Manual lever downwards.

   The Safe@Office appliance does not check for software updates automatically.

4. To manually check for software updates, click Update Now.

   The system checks for new updates and installs them.

Chapter 12

Working With VPNs

This chapter describes how to use your Safe@Office appliance as a Remote Access VPN Client, server, or gateway.

This chapter includes the following topics:

Overview 303
Setting Up Your Safe@Office Appliance as a VPN Server 309
Adding and Editing VPN Sites 314
Deleting a VPN Site 345
Enabling/Disabling a VPN Site 345
Logging on to a Remote Access VPN Site 346
Logging off a Remote Access VPN Site 350
Installing a Certificate 350
Uninstalling a Certificate 357
Viewing VPN Tunnels 358
Viewing IKE Traces for VPN Connections 361

Overview

You can configure your Safe@Office appliance as part of a virtual private network (VPN). A VPN is a private data network consisting of a group of gateways that can securely connect to each other. Each member of the VPN is called a *VPN site*, and a connection between two VPN sites is called a *VPN tunnel*. VPN tunnels encrypt and authenticate all traffic passing through them. Through these tunnels, employees can safely use their company's network resources when working at home. For example, they can securely read email, use the company's intranet, or access the company's database from home.

The are four types of VPN sites:

- Remote Access VPN Server. Makes a network remotely available to authorized users, who connect to the Remote Access VPN Server using the

Check Point SecuRemote VPN Client, provided for free with your Safe@Office, or from another Safe@Office.

- Internal VPN Server. SecuRemote can also be used from your internal networks, allowing you to secure your wired or wireless network with strong encryption and authentication.
- Site-to-Site VPN Gateway. Can connect with another Site-to-Site VPN Gateway in a permanent, bi-directional relationship.
- Remote Access VPN Client. Can connect to a Remote Access VPN Server, but other VPN sites cannot initiate a connection to the Remote Access VPN Client. Defining a Remote Access VPN Client is a hardware alternative to using SecuRemote software.

Both Safe@Office 500 and 500W provide full VPN functionality. They can act as a Remote Access VPN Client, a Remote Access VPN Server for multiple users, or a Site-to-Site VPN Gateway.

A virtual private network (VPN) must include at least one Remote Access VPN Server or gateway. The type of VPN sites you include in a VPN depends on the type of VPN you want to create, Site-to-Site or Remote Access.

Note: A locally managed Remote Access VPN Server or gateway must have a static IP address. If you need a Remote Access VPN Server or gateway with a dynamic IP address, you must use SofaWare Security Management Portal (SMP) management.

A SecuRemote or Safe@Office Remote Access VPN Client can have a dynamic IP address, regardless of whether it is locally or remotely managed.

Note: This chapter explains how to define a VPN locally. However, if your appliance is centrally managed by a Service Center, then the Service Center can automatically deploy VPN configuration for your appliance.

Site-to-Site VPNs

A Site-to-Site VPN consists of two or more Site-to-Site VPN Gateways that can communicate with each other in a bi-directional relationship. The connected

networks function as a single network. You can use this type of VPN to mesh office branches into one corporate network.

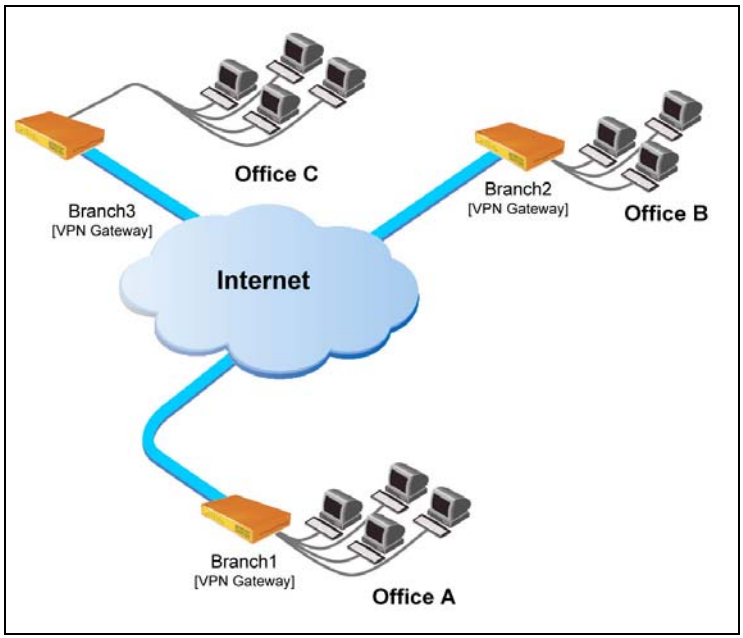


Figure 12: Site-to-Site VPN

To create a Site-to-Site VPN with two VPN sites

1. On the first VPN site's Safe@Office appliance, do the following:
   a. Define the second VPN site as a Site-to-Site VPN Gateway, or create a PPPoE tunnel to the second VPN site, using the procedure ***Adding and Editing VPN Sites*** on page 314.
   b. Enable the Remote Access VPN Server using the procedure ***Setting Up Your Safe@Office Appliance as a Remote Access VPN Server*** on page 309.
2. On the second VPN site's Safe@Office appliance, do the following:
   a. Define the first VPN site as a Site-to-Site VPN Gateway, or create a PPPoE tunnel to the first VPN site, using the procedure ***Adding and Editing VPN Sites*** on page 314.
   b. Then enable the Remote Access VPN Server using the procedure ***Setting Up Your Safe@Office Appliance as a Remote Access VPN Server*** on page 309.

Remote Access VPNs

A Remote Access VPN consists of one Remote Access VPN Server or Site-to-Site VPN Gateway, and one or more Remote Access VPN Clients. You can use this type of VPN to make an office network remotely available to authorized users, such as employees working from home, who connect to the office Remote Access VPN Server with their Remote Access VPN Clients.

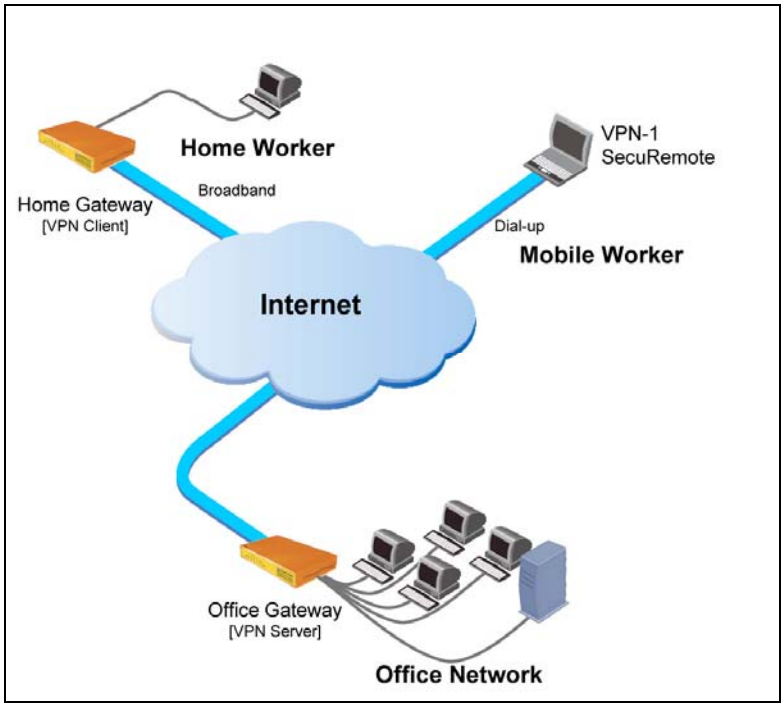


Figure 13: Remote Access VPN

To create a Remote Access VPN with two VPN sites

1. On the remote user VPN site's Safe@Office appliance, add the office Remote Access VPN Server as a Remote Access VPN site.

   See ***Adding and Editing VPN Sites*** on page 314.

   The remote user's Safe@Office appliance will act as a Remote Access VPN Client.

2. On the office VPN site's Safe@Office appliance, enable the Remote Access VPN Server.

   See ***Setting Up Your Safe@Office Appliance as a Remote Access VPN Server*** on page 309.

Internal VPN Server

You can use your Safe@Office appliance as an internal VPN Server, for enhanced wired and wireless security. When the internal VPN Server is enabled, internal network PCs and PDAs with SecuRemote VPN Client software installed can establish a Remote Access VPN session to the gateway. This means that connections from internal network users to the gateway can be encrypted and authenticated.

The benefits of using the internal VPN Server are two-fold:

- Accessibility

  Using SecuRemote, you can enjoy a secure connection from anywhere—in your wireless network or on the road—without changing any settings. The standard is completely transparent and allows you to access company resources the same way, whether you are sitting at your desk or anywhere else.

- Security

  Many of today's attacks are increasingly introduced from inside the network. Internal security threats cause outages, downtime, and lost revenue. Wired networks that deal with highly sensitive information—especially networks in public places, such as classrooms—are vulnerable to users trying to hack the internal network.

Using the internal VPN Server, along with a strict security policy for non-VPN users, can enhance security both for wired networks and for wireless networks, which are particularly vulnerable to security breaches.

The internal VPN Server can be used in the Safe@Office 500W wireless appliance, regardless of the wireless security settings. It also can be used in wired appliances, both for wired stations and for wireless stations.

Note: You can enable wireless connections to a wired Safe@Office appliance, by connecting a wireless access point in bridge mode to one of the appliance's internal interfaces. Do not connect computers to the same interface as a wireless access point, since allowing direct access from the wireless network may pose a significant security risk.

For information on setting up your Safe@Office appliance as an internal VPN Server, see ***Setting Up Your Safe@Office Appliance as a VPN Server*** on page 309.

Setting Up Your Safe@Office Appliance as a VPN Server

500

You can make your network available to authorized users connecting from the Internet or from your internal networks, by setting up your Safe@Office appliance as a VPN Server. Users can connect to the VPN Server via Check Point SecuRemote or via a Safe@Office appliance in Remote Access VPN mode.

Enabling the VPN Server for users connecting from your internal networks adds a layer of security to such connections. For example, while you could create a firewall rule allowing a specific user on the DMZ or WLAN to access the LAN, enabling VPN access for the user means that such connections can be encrypted and authenticated. For more information, see ***Internal VPN Server*** on page 308.

To set up your Safe@Office appliance as a VPN Server

1. Configure the VPN Server in one or more of the following ways:
   - To accept remote access connections from the Internet.

     See ***Configuring the Remote Access VPN Server*** on page 311.
   - To accept connections from your internal networks.

     See ***Configuring the Internal VPN Server*** on page 312.
2. If you configured the internal VPN Server, install SecuRemote on the desired internal network computers.

   See ***Installing SecuRemote*** on page 313.
3. Set up remote VPN access for users.

   See ***Setting Up Remote VPN Access for Users*** on page 371.

Note: Disabling the VPN Server for a specific type of connection (from the Internet or from internal networks) will cause all existing VPN tunnels of that type to disconnect.

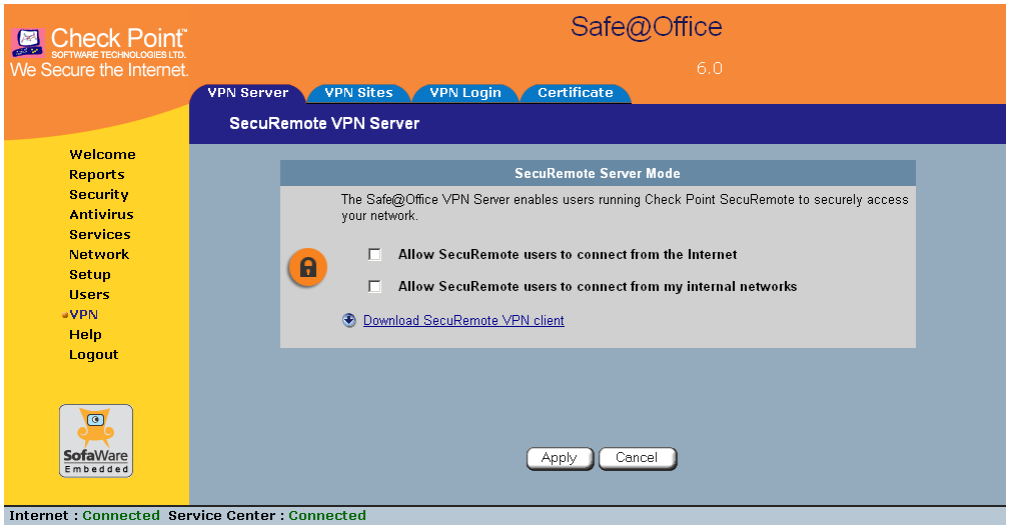
Configuring the Remote Access VPN Server

500

To configure the Remote Access VPN Server

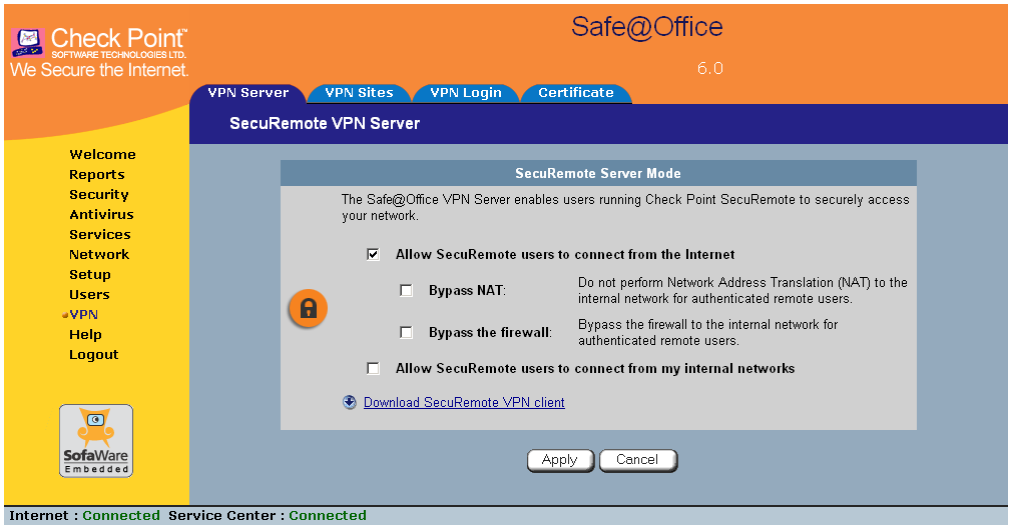
1. Click VPN in the main menu, and click the VPN Server tab.

   The SecuRemote VPN Server page appears.



2. Select the Allow SecuRemote users to connect from the Internet check box.

New check boxes appear.



3. To allow authenticated users connecting from the Internet to bypass NAT when connecting to your internal network, select the Bypass NAT check box.
4. To allow authenticated users connecting from the Internet to bypass the firewall and access your internal network without restriction, select the Bypass the firewall check box.
5. Click Apply.

   The Remote Access VPN Server is enabled for the specified connection types.

Configuring the Internal VPN Server

500

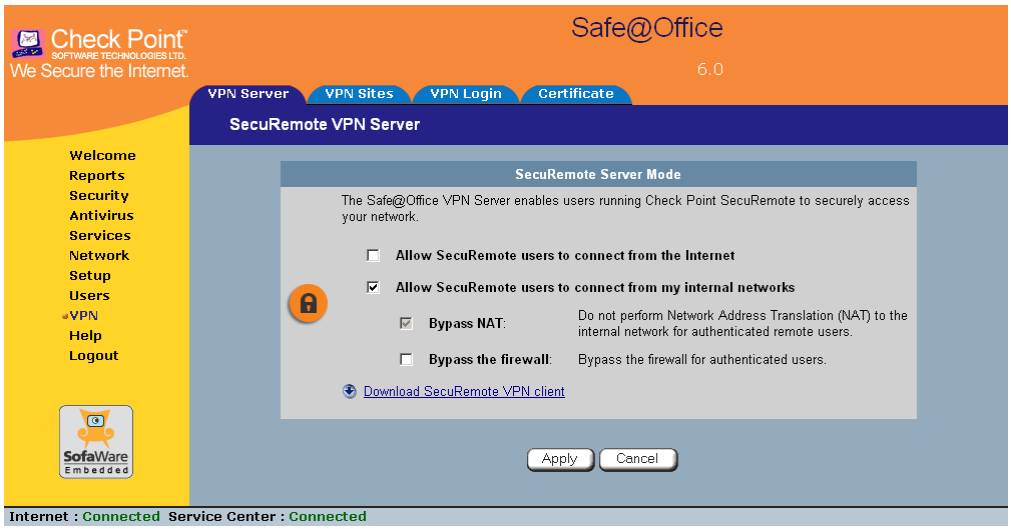
To configure the internal VPN Server

1. Click VPN in the main menu, and click the VPN Server tab.

   The SecuRemote VPN Server page appears.

2. Select the Allow SecuRemote users to connect from my internal networks check box.

   New check boxes appear.



3. To allow authenticated users connecting from internal networks to bypass the firewall and access your internal network without restriction, select the Bypass the firewall check box.

   Bypass NAT is always enabled for the internal VPN server, and cannot be disabled.

4. Click Apply.

   The internal VPN Server is enabled for the specified connection types.

Installing SecuRemote

500

If you configured the Remote Access VPN Server to accept connections from your internal networks, you must install the SecuRemote VPN Client on internal network computers that should be allowed to remotely access your network.

To install SecuRemote

1. Click VPN in the main menu, and click the VPN Server tab.

   The SecuRemote VPN Server page appears.

2. Click the Download SecuRemote VPN client link.

   The VPN-1 SecuRemote for Safe@Office page opens in a new window.

3. Follow the online instructions to complete installation.

   SecuRemote is installed.

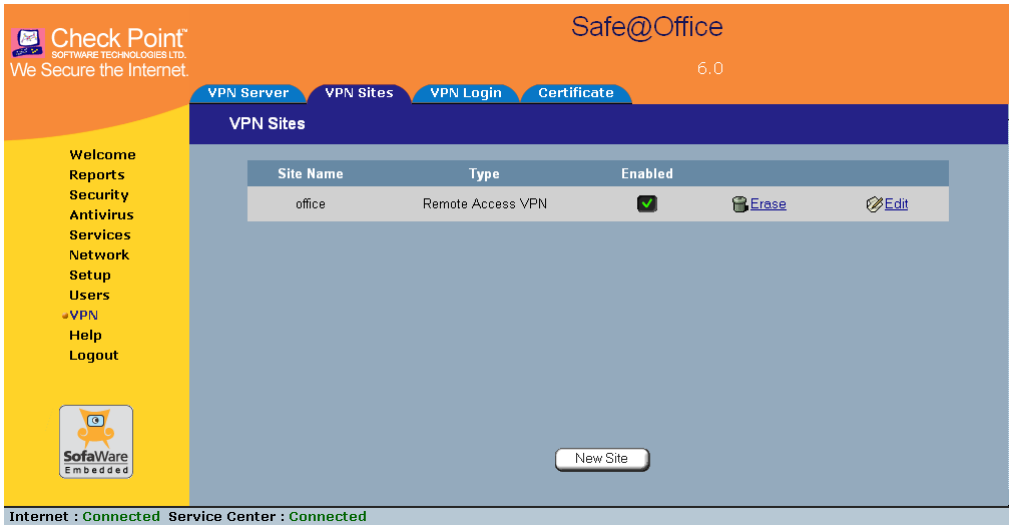
   For information on using SecuRemote, see the User Help. To access SecuRemote User Help, right-click on the SecuRemote VPN Client icon in the taskbar, select Settings, and then click Help.

Adding and Editing VPN Sites

To add or edit VPN sites

1. Click VPN in the main menu, and click the VPN Sites tab.

The VPN Sites page appears with a list of VPN sites.



2. Do one of the following:

   - To add a VPN site, click New Site.
   - To edit a VPN site, click Edit in the desired VPN site's row.

   The Safe@Office VPN Site Wizard opens, with the Welcome to the VPN Site Wizard dialog box displayed.

3. Do one of the following:
   - Select Remote Access VPN to establish remote access from your Remote Access VPN Client to a Remote Access VPN Server.
   - Select Site-to-Site VPN to create a permanent bi-directional connection to another Site-to-Site VPN Gateway.
4. Click Next.

Configuring a Remote Access VPN Site

If you selected Remote Access VPN, the VPN Gateway Address dialog box appears.

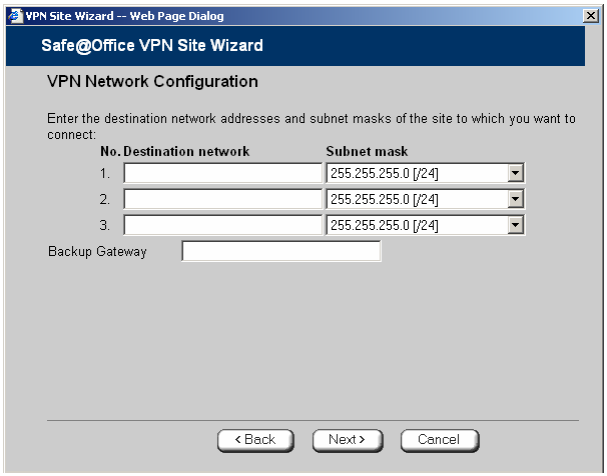
1. Enter the IP address of the Remote Access VPN Server to which you want to connect, as given to you by the network administrator.
2. To allow the VPN site to bypass the firewall and access your internal network without restriction, select the Bypass the firewall check box.
3. Click Next.

The VPN Network Configuration dialog box appears.

4. Specify how you want to obtain the VPN network configuration. Refer to ***VPN Network Configuration Fields*** on page 325.
5. Click Next.

   The following things happen in the order below:

   - If you chose Specify Configuration, a second VPN Network Configuration dialog box appears.



Complete the fields using the information in ***VPN Network Configuration Fields*** on page 325 and click Next.

- The Authentication Method dialog box appears.

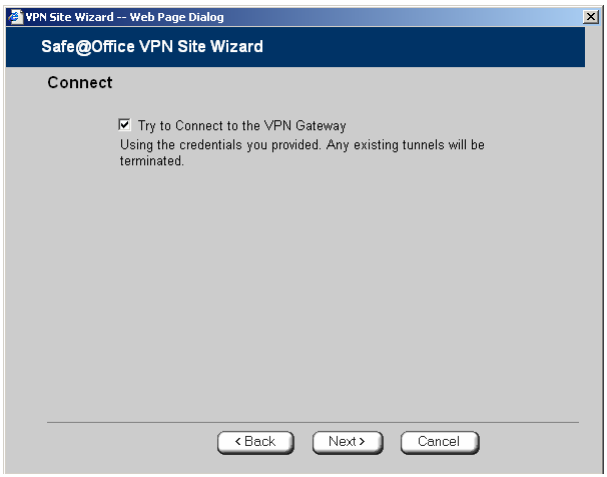
6. Complete the fields using the information in ***Authentication Methods Fields*** on page 327.
7. Click Next.

Username and Password Authentication Method

If you selected Username and Password, the VPN Login dialog box appears.

1. Complete the fields using the information in ***VPN Login Fields*** on page 327.
2. Click Next.

   - If you selected Automatic Login, the Connect dialog box appears.



Do the following:

1) To try to connect to the Remote Access VPN Server, select the **Try to Connect to the VPN Gateway** check box.

   This allows you to test the VPN connection.

Warning: If you try to connect to the VPN site before completing the wizard, all existing tunnels will be terminated.

2) Click **Next**.

   If you selected **Try to Connect to the VPN Gateway**, the **Connecting**... screen appears, and then the **Contacting VPN Site** screen appears.

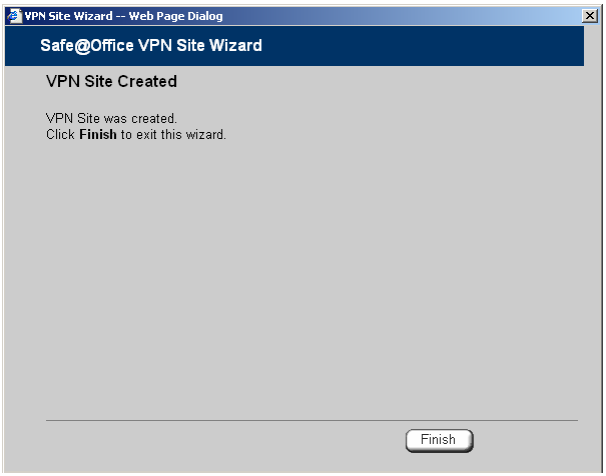
- The **Site Name** dialog box appears.

3. Enter a name for the VPN site.

   You may choose any name.

4. Click **Next**.

The VPN Site Created screen appears.



5. Click Finish.

   The VPN Sites page reappears. If you added a VPN site, the new site appears in the VPN Sites list. If you edited a VPN site, the modifications are reflected in the VPN Sites list.

Certificate Authentication Method

If you selected Certificate, the Connect dialog box appears.

1. To try to connect to the Remote Access VPN Server, select the Try to Connect to the VPN Gateway check box.

   This allows you to test the VPN connection.

Warning: If you try to connect to the VPN site before completing the wizard, all existing tunnels will be terminated.

2. Click Next.

   If you selected Try to Connect to the VPN Gateway, the Connecting... screen appears, and then the Contacting VPN Site screen appears.

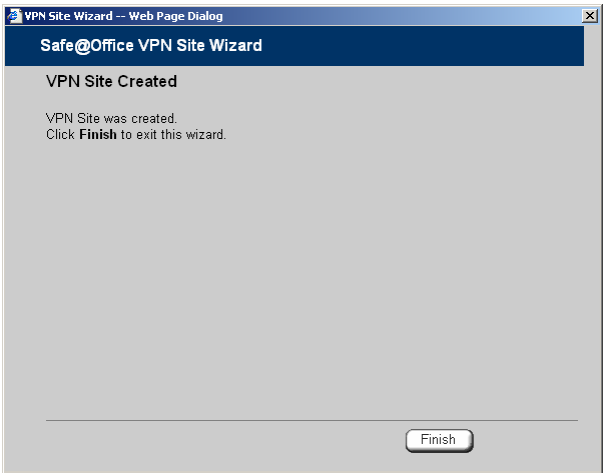
   The Site Name dialog box appears.

3. Enter a name for the VPN site.

   You may choose any name.

4. Click Next.

The VPN Site Created screen appears.



5. Click Finish.

   The VPN Sites page reappears. If you added a VPN site, the new site appears in the VPN Sites list. If you edited a VPN site, the modifications are reflected in the VPN Sites list.

RSA SecurID Authentication Method

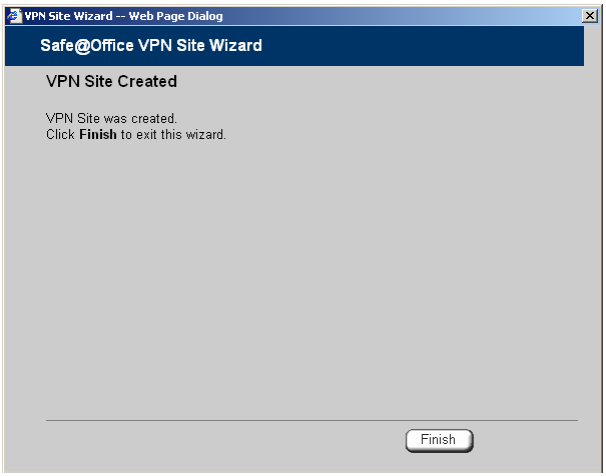
If you selected RSA SecurID, the Site Name dialog box appears.

1. Enter a name for the VPN site.

   You may choose any name.

2. Click Next.

   The VPN Site Created screen appears.



3. Click Finish.

   The VPN Sites page reappears. If you added a VPN site, the new site appears in the VPN Sites list. If you edited a VPN site, the modifications are reflected in the VPN Sites list.

Table 63: VPN Network Configuration Fields

In this field…	Do this…
Download Configuration	Click this option to obtain the network configuration by downloading it from the VPN site. This option will automatically configure your VPN settings, by downloading the network topology definition from the Remote Access VPN Server. Note: Downloading the network configuration is only possible if you are connecting to a Check Point VPN-1 or Safe@Office Site-to-Site VPN Gateway.
Specify Configuration	Click this option to provide the network configuration manually.
Route All Traffic	Click this option to route all network traffic through the VPN site. For example, if your VPN consists of a central office and a number of remote offices, and the remote offices are only allowed to access Internet resources through the central office, you can choose to route all traffic from the remote offices through the central office. Note: You can only configure one VPN site to route all traffic.

In this field…	Do this…
Route Based VPN	Click this option to create a virtual tunnel interface (VTI) for this site, so that it can participate in a route-based VPN. Route-based VPNs allow routing connections over VPN tunnels, so that remote VPN sites can participate in dynamic or static routing schemes. This improves network and VPN management efficiency for large networks. For constantly changing networks, it is recommended to use a route-based VPN combined with OSPF dynamic routing. This enables you to make frequent changes to the network topology, such as adding an internal network, without having to reconfigure static routes. OSPF is enabled using CLI. For information on using CLI, see ***Controlling the Appliance via the Command Line*** on page 390. For information on the relevant commands for OSPF, refer to the *Embedded NGX CLI Reference Guide*. This option is only available for when configuring a Site-to-Site VPN gateway.
Destination network	Type up to three destination network addresses at the VPN site to which you want to connect.
Subnet mask	Select the subnet masks for the destination network addresses. Note: Obtain the destination networks and subnet masks from the VPN site's system administrator.
Backup Gateway	Type the name of the VPN site to use if the primary VPN site fails.

Table 64: Authentication Methods Fields

In this field…	Do this…
Username and Password	Select this option to use a user name and password for VPN authentication. In the next step, you can specify whether you want to log on to the VPN site automatically or manually.
Certificate	Select this option to use a certificate for VPN authentication. If you select this option, a certificate must have been installed. (Refer to ***Installing a Certificate*** on page 350 for more information about certificates and instructions on how to install a certificate.)
RSA SecurID Token	Select this option to use an RSA SecurID token for VPN authentication. When authenticating to the VPN site, you must enter a four-digit PIN code and the SecurID passcode shown in your SecurID token's display. The RSA SecurID token generates a new passcode every minute. SecurID is only supported in Remote Access manual login mode.

Table 65: VPN Login Fields

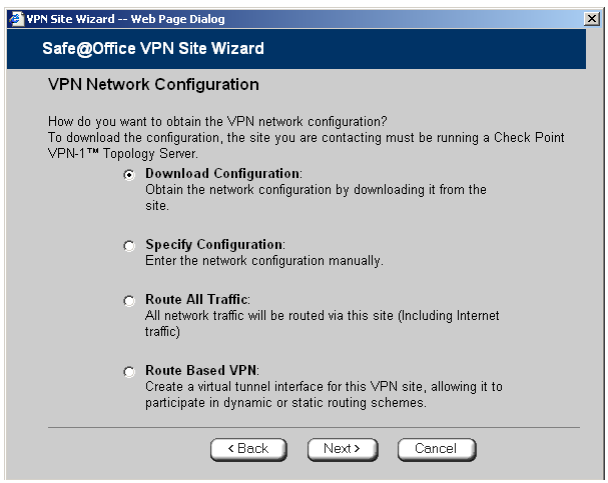
In this field…	Do this…
Manual Login	Click this option to configure the site for Manual Login. Manual Login connects only the computer you are currently logged onto to the VPN site, and only when the appropriate user name and password have been entered. For further information on Automatic and Manual Login, see, ***Logging on to a VPN Site*** on page 346.
Automatic Login	Click this option to enable the Safe@Office appliance to log on to the VPN site automatically. You must then fill in the Username and Password fields. Automatic Login provides all the computers on your internal network with constant access to the VPN site. For further information on Automatic and Manual Login, see ***Logging on to a VPN Site*** on page 346.
Username	Type the user name to be used for logging on to the VPN site.
Password	Type the password to be used for logging on to the VPN site.

Configuring a Site-to-Site VPN Gateway

If you selected Site-to-Site VPN, the VPN Gateway Address dialog box appears.

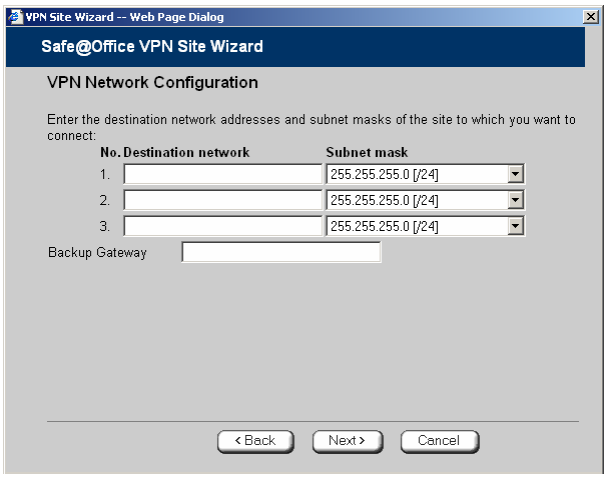
1. Complete the fields using the information in ***VPN Gateway Address Fields*** on page 340.
2. Click Next.

   The VPN Network Configuration dialog box appears.



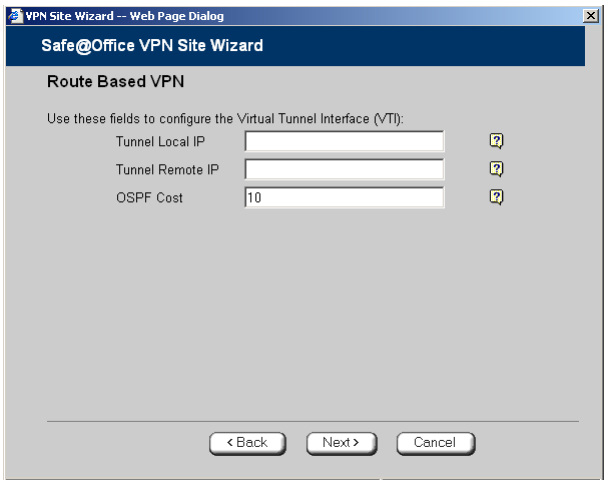
3. Specify how you want to obtain the VPN network configuration. Refer to ***VPN Network Configuration Fields*** on page 325.
4. Click Next.

   - If you chose Specify Configuration, a second VPN Network Configuration dialog box appears.



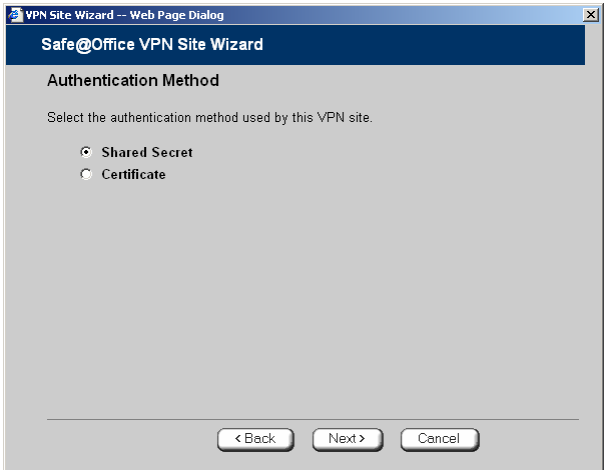
   Complete the fields using the information in ***VPN Network Configuration Fields*** on page 325, and then click Next.

- If you chose Route Based VPN, the Route Based VPN dialog box appears.



Complete the fields using the information in ***Route Based VPN Fields*** on page 341, and then click Next.

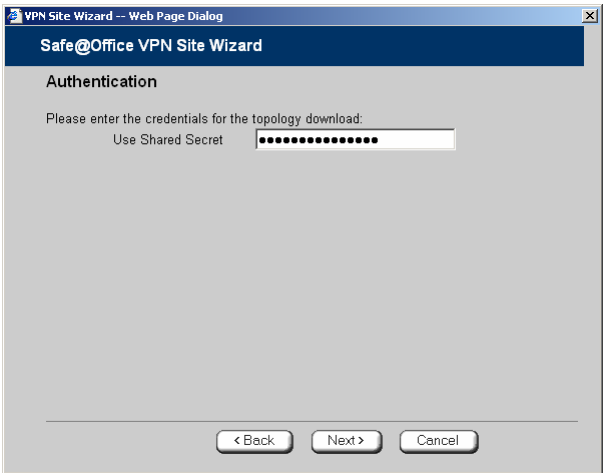
- The Authentication Method dialog box appears.



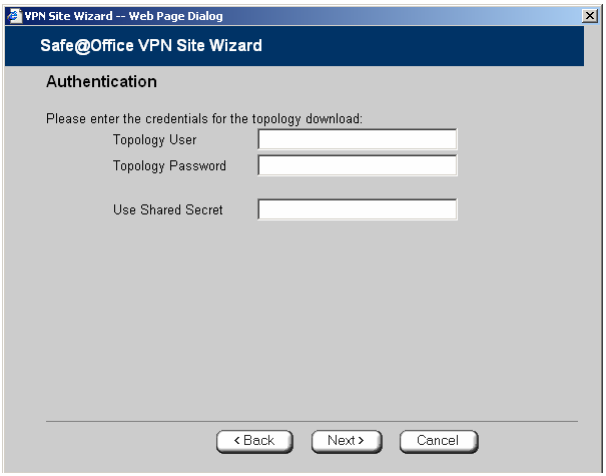
5. Complete the fields using the information in ***Authentication Methods Fields*** on page 342.
6. Click Next.

Shared Secret Authentication Method

If you selected Shared Secret, the Authentication dialog box appears.



If you chose Download Configuration, the dialog box contains additional fields.



1. Complete the fields using the information in ***VPN Authentication Fields*** on page 342 and click Next.

The Security Methods dialog box appears.

2. To configure advanced security settings, click Show Advanced Settings.

   New fields appear.

3. Complete the fields using the information in ***Security Methods Fields*** on page 342 and click Next.

The Connect dialog box appears.

4. To try to connect to the Remote Access VPN Server, select the Try to Connect to the VPN Gateway check box.

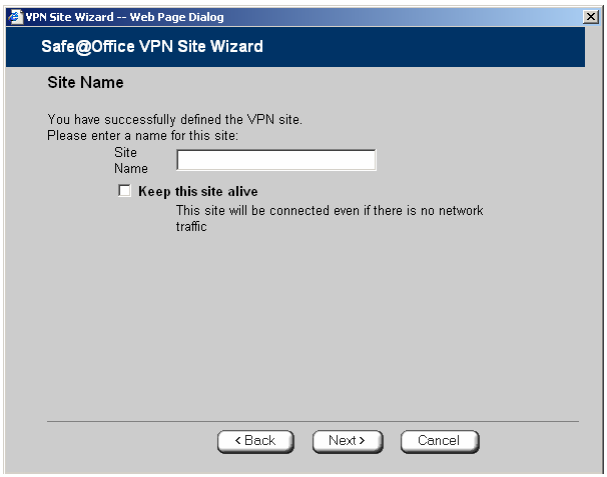
   This allows you to test the VPN connection.

Warning: If you try to connect to the VPN site before completing the wizard, all existing tunnels will be terminated.

5. Click Next.

   - If you selected Try to Connect to the VPN Gateway, the Connecting... screen appears, and then the Contacting VPN Site screen appears.

- The Site Name dialog box appears.



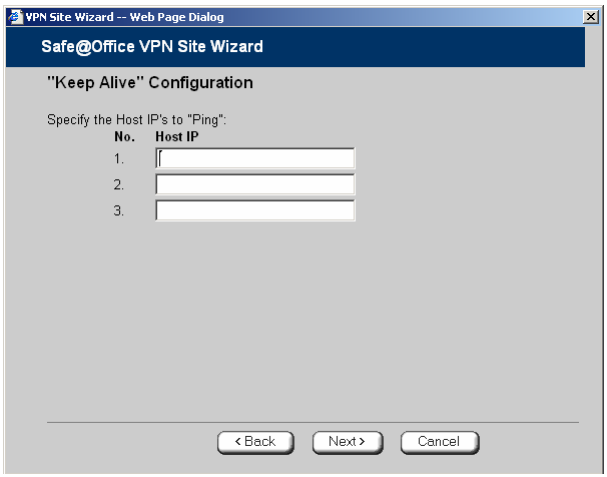
6. Enter a name for the VPN site.

   You may choose any name.

7. To keep the tunnel to the VPN site alive even if there is no network traffic between the Safe@Office appliance and the VPN site, select Keep this site alive.

8. Click Next.

- If you selected Keep this site alive, and previously you chose Download Configuration, the "Keep Alive" Configuration dialog box appears.



  Do the following:

  1) Type up to three IP addresses which the Safe@Office appliance should ping in order to keep the tunnel to the VPN site alive.

  2) Click Next.

- The VPN Site Created screen appears.

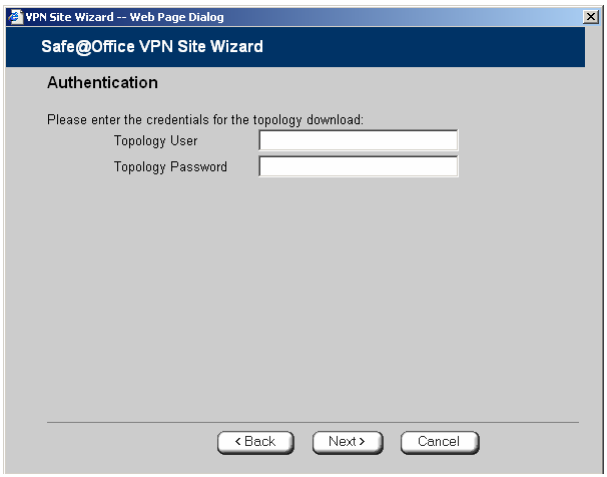
9. Click Finish.

   The VPN Sites page reappears. If you added a VPN site, the new site appears in the VPN Sites list. If you edited a VPN site, the modifications are reflected in the VPN Sites list.

Certificate Authentication Method

If you selected Certificate, the following things happen:

- If you chose Download Configuration, the Authentication dialog box appears.



Complete the fields using the information in ***VPN Authentication Fields*** on page 342 and click Next.

- The Security Methods dialog box appears.

1. To configure advanced security settings, click Show Advanced Settings.

New fields appear.

2. Complete the fields using the information in ***Security Methods Fields*** on page 342 and click Next.

   The Connect dialog box appears.

3. To try to connect to the Remote Access VPN Server, select the Try to Connect to the VPN Gateway check box.

   This allows you to test the VPN connection.

Warning: If you try to connect to the VPN site before completing the wizard, all existing tunnels will be terminated.

4. Click **Next**.

   - If you selected **Try to Connect to the VPN Gateway**, the following things happen:

     The **Connecting**... screen appears.

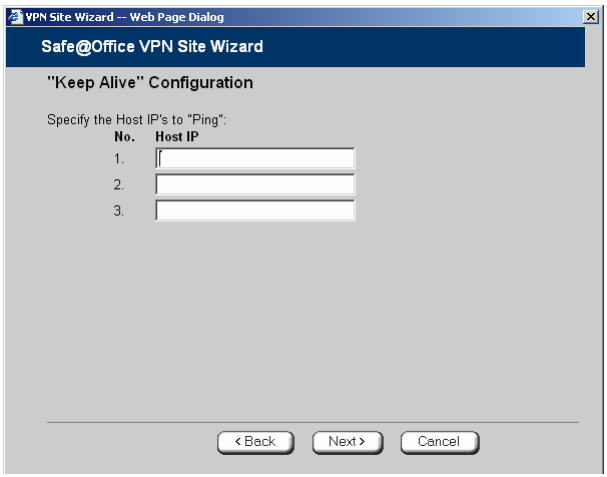
   - The **Contacting VPN Site** screen appears.
   - The **Site Name** dialog box appears.

5. Enter a name for the VPN site.

   You may choose any name.

6. To keep the tunnel to the VPN site alive even if there is no network traffic between the Safe@Office appliance and the VPN site, select **Keep this site alive**.
7. Click **Next**.

- If you selected Keep this site alive, and previously you chose Download Configuration, the "Keep Alive" Configuration dialog box appears.



  Do the following:

  1) Type up to three IP addresses which the Safe@Office appliance should ping in order to keep the tunnel to the VPN site alive.

  2) Click Next.

- The VPN Site Created screen appears.

8. Click Finish.

   The VPN Sites page reappears. If you added a VPN site, the new site appears in the VPN Sites list. If you edited a VPN site, the modifications are reflected in the VPN Sites list.

Table 66: VPN Gateway Address Fields

In this field…	Do this…
Gateway Address	Type the IP address of the Site-to-Site VPN Gateway to which you want to connect, as given to you by the network administrator.
Bypass NAT	Select this option to allow the VPN site to bypass NAT when connecting to your internal network. This option is selected by default.
Bypass the firewall	Select this option to allow the VPN site to bypass the firewall and access your internal network without restriction.

Table 67: Route Based VPN Fields

In this field…	Do this…
Tunnel Local IP	Type a local IP address for this end of the VPN tunnel.
Tunnel Remote IP	Type the IP address of the remote end of the VPN tunnel.
OSPF Cost	Type the cost of this link for dynamic routing purposes. The default value is 10. If OSPF is not enabled, this setting is not used. OSPF is enabled using the Safe@Office command line interface (CLI). For information on using CLI, see ***Controlling the Appliance via the Command Line*** on page 390. For information on the relevant commands for OSPF, refer to the *Embedded NGX CLI Reference Guide*.

Table 68: Authentication Methods Fields

In this field…	Do this…
Shared Secret	Select this option to use a shared secret for VPN authentication. A shared secret is a string used to identify VPN sites to each other.
Certificate	Select this option to use a certificate for VPN authentication. If you select this option, a certificate must have been installed. (Refer to ***Installing a Certificate*** on page 350 for more information about certificates and instructions on how to install a certificate.)

Table 69: VPN Authentication Fields

In this field…	Do this…
Topology User	Type the topology user's user name.
Topology Password	Type the topology user's password.
Use Shared Secret	Type the shared secret to use for secure communications with the VPN site. This shared secret is a string used to identify the VPN sites to each other. The secret can contain spaces and special characters.

Table 70: Security Methods Fields

In this field…	Do this…
Phase 1	
Security Methods	Select the encryption and integrity algorithm to use for IKE negotiations: • Automatic. The Safe@Office appliance automatically selects the best security methods supported by the site. This is the default. • A specific algorithm
Diffie-Hellman group	Select the Diffie-Hellman group to use: • Automatic. The Safe@Office appliance automatically selects a group. This is the default. • A specific group A group with more bits ensures a stronger key but lowers performance.
Renegotiate every	Type the interval in minutes between IKE Phase-1 key negotiations. This is the *IKE Phase-1 SA lifetime*. A shorter interval ensures higher security, but impacts heavily on performance. Therefore, it is recommended to keep the SA lifetime around its default value. The default value is 1440 minutes (one day).
Phase 2	
Security Methods	Select the encryption and integrity algorithm to use for VPN traffic: • Automatic. The Safe@Office appliance automatically selects the best security methods supported by the site. This is the default. • A specific algorithm

In this field…	Do this…
Perfect Forward Secrecy	Specify whether to enable Perfect Forward Secrecy (PFS), by selecting one of the following: • Enabled. PFS is enabled. The Diffie-Hellman group field is enabled. • Disabled. PFS is disabled. This is the default. Enabling PFS will generate a new Diffie-Hellman key during IKE Phase 2 and renew the key for each key exchange. PFS increases security but lowers performance. It is recommended to enable PFS only in situations where extreme security is required.
Diffie-Hellman group	Select the Diffie-Hellman group to use: • Automatic. The Safe@Office appliance automatically selects a group. This is the default. • A specific group A group with more bits ensures a stronger key but lowers performance.
Renegotiate every	Type the interval in seconds between IPSec SA key negotiations. This is the *IKE Phase-2 SA lifetime*. A shorter interval ensures higher security. The default value is 3600 seconds (one hour).

Deleting a VPN Site

500

To delete a VPN site

1. Click VPN in the main menu, and click the VPN Sites tab.
   The VPN Sites page appears, with a list of VPN sites.
2. In the desired VPN site's row, click the Erase icon.
   A confirmation message appears.
3. Click OK.
   The VPN site is deleted.

Enabling/Disabling a VPN Site

500

You can only connect to VPN sites that are enabled.

To enable/disable a VPN site

1. Click VPN in the main menu, and click the VPN Sites tab.
   The VPN Sites page appears, with a list of VPN sites.
2. To enable a VPN site, do the following:
   a. Click the icon in the desired VPN site's row.
      A confirmation message appears.
   b. Click OK.
      The icon changes to , and the VPN site is enabled.

3. To disable a VPN site, do the following:

Note: Disabling a VPN site eliminates the tunnel and erases the network topology.

a. Click the icon in the desired VPN site's row.

   A confirmation message appears.

b. Click OK.

   The icon changes to , and the VPN site is disabled.

Logging on to a Remote Access VPN Site

You need to manually log on to Remote Access VPN Servers configured for Manual Login. You do not need to manually log on to a Remote Access VPN Server configured for Automatic Login or a Site-to-Site VPN Gateway: all the computers on your network have constant access to it.

Manual Login can be done through either the Safe@Office Portal or the my.vpn page. When you log on and traffic is sent to the VPN site, a VPN tunnel is established. Only the computer from which you logged on can use the tunnel. To share the tunnel with other computers in your home network, you must log on to the VPN site from those computers, using the same user name and password.

Note: You must use a single user name and password for each VPN destination gateway.

Logging on through the Safe@Office Portal

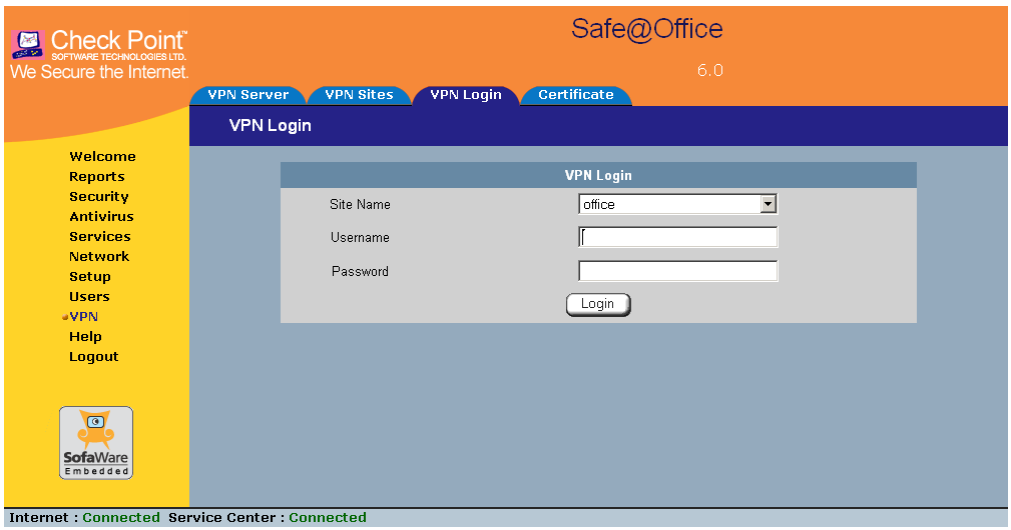
500

Note: You can only login to sites that are configured for Manual Login.

To manually log on to a VPN site through the Safe@Office Portal

1. Click VPN in the main menu, and click the VPN Login tab.

   The VPN Login page appears.



2. From the Site Name list, select the site to which you want to log on.

Note: Disabled VPN sites will not appear in the Site Name list.

3. Type your user name and password in the appropriate fields.
4. Click Login.

- If the Safe@Office appliance is configured to automatically download the network configuration, the Safe@Office appliance downloads the network configuration.
- If when adding the VPN site you specified a network configuration, the Safe@Office appliance attempts to create a tunnel to the VPN site.
- Once the Safe@Office appliance has finished connecting, the VPN Login Status box appears. The Status field displays “Connected”.

- The VPN Login Status box remains open until you manually log off the VPN site.

Logging on through the my.vpn page

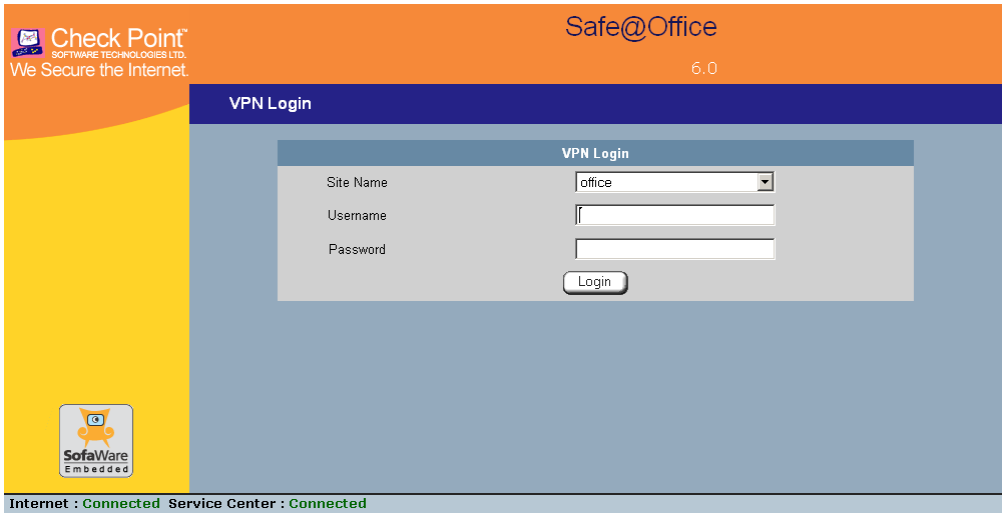
500

Note: You don’t need to know the my.firewall page administrator’s password in order to use the my.vpn page.

To manually log on to a VPN site through the my.vpn page

1. Direct your Web browser to http://my.vpn

The VPN Login screen appears.



2. In the Site Name list, select the site to which you want to log on.
3. Enter your user name and password in the appropriate fields.
4. Click Login.

- If the Safe@Office appliance is configured to automatically download the network configuration, the Safe@Office appliance downloads the network configuration.
- If when adding the VPN site you specified a network configuration, the Safe@Office appliance attempts to create a tunnel to the VPN site.
- The VPN Login Status box appears. The Status field tracks the connection's progress.
- Once the Safe@Office appliance has finished connecting, the Status field changes to "Connected".
- The VPN Login Status box remains open until you manually log off of the VPN site.

Logging off a Remote Access VPN Site

500

You need to manually log off a VPN site, if it is a Remote Access VPN site configured for Manual Login.

To log off a VPN site

- In the VPN Login Status box, click Logout.

  All open tunnels from the Safe@Office appliance to the VPN site are closed, and the VPN Login Status box closes.

Note: Closing the browser or dismissing the VPN Login Status box will also terminate the VPN session within a short time.

Installing a Certificate

500

A digital certificate is a secure means of authenticating the Safe@Office appliance to other Site-to-Site VPN Gateways. The certificate is issued by the Certificate Authority (CA) to entities such as gateways, users, or computers. The entity then uses the certificate to identify itself and provide verifiable information.

For instance, the certificate includes the Distinguished Name (DN) (identifying information) of the entity, as well as the public key (information about itself). After two entities exchange and validate each other's certificates, they can begin encrypting information between themselves using the public keys in the certificates.

The certificate also includes a fingerprint, a unique text used to identify the certificate. You can email your certificate's fingerprint to the remote user. Upon connecting to the Safe@Office VPN Server for the first time, the entity should check that the VPN peer's fingerprint displayed in the SecuRemote VPN Client is identical to the fingerprint received.

The Safe@Office appliance supports certificates encoded in the PKCS#12 (Personal Information Exchange Syntax Standard) format, and enables you to install such certificates in the following ways:

- By generating a self-signed certificate.

  See ***Generating a Self-Signed Certificate*** on page 351.

- By importing a certificate.

  The PKCS#12 file you import must have a ".p12" file extension. If you do not have such a PKCS#12 file, obtain one from your network security administrator.

  See ***Importing a Certificate*** on page 355.

Note: To use certificates authentication, each Safe@Office appliance should have a unique certificate. Do not use the same certificate for more than one gateway.

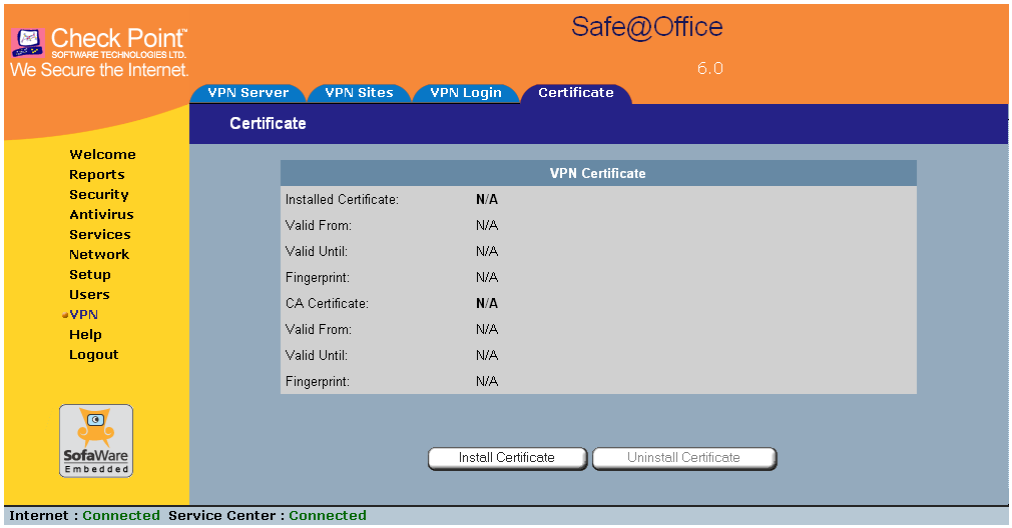
Note: If your Safe@Office appliance is centrally managed, a certificate is automatically generated and downloaded to your appliance. In this case, there is no need to generate a self-signed certificate.

Generating a Self-Signed Certificate

To generate a self-signed certificate

1. Click VPN in the main menu, and click the Certificate tab.

The **Certificate** page appears.



2. Click **Install Certificate**.

   The **Safe@Office Certificate Wizard** opens, with the **Certificate Wizard** dialog box displayed.

3. Click **Generate a self-signed security certificate for this gateway**.

The Create Self-Signed Certificate dialog box appears.

4. Complete the fields using the information in the table below.
5. Click Next.

   The Safe@Office appliance generates the certificate. This may take a few seconds.

   The Done dialog box appears, displaying the certificate's details.

6. Click Finish.

The Safe@Office appliance installs the certificate. If a certificate is already installed, it is overwritten.

The Certificate Wizard closes.

The Certificates page displays the following information:

- The gateway's certificate
- The gateway's name
- The gateway certificate's fingerprint
- The CA's certificate
- The name of the CA that issued the certificate (in this case, the Safe@Office gateway)
- The CA certificate's fingerprint
- The starting and ending dates between which the gateway's certificate and the CA's certificate are valid

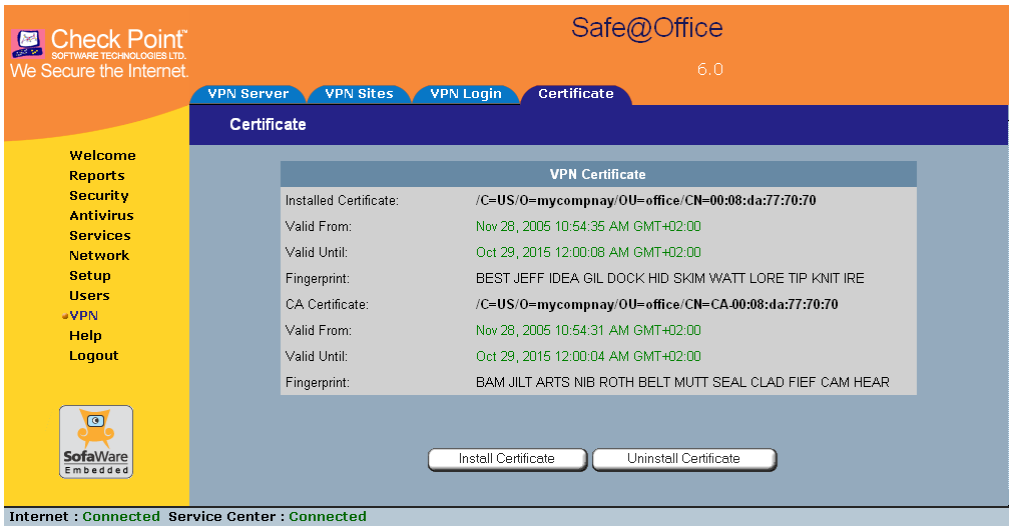


Table 71: Certificate Fields

In this field…	Do this…
Country	Select your country from the drop-down list.
Organization Name	Type the name of your organization.
Organizational Unit	Type the name of your division.
Gateway Name	Type the gateway's name. This name will appear on the certificate, and will be visible to remote users inspecting the certificate. This field is filled in automatically with the gateway's MAC address. If desired, you can change this to a more descriptive name.
Valid Until	Use the drop-down lists to specify the month, day, and year when this certificate should expire. Note: You must renew the certificate when it expires.

Importing a Certificate

To install a certificate

1. Click VPN in the main menu, and click the Certificate tab.

   The Certificate page appears.

2. Click Install Certificate.

   The Safe@Office Certificate Wizard opens, with the Certificate Wizard dialog box displayed.

3. Click Import a security certificate in PKCS#12 format.

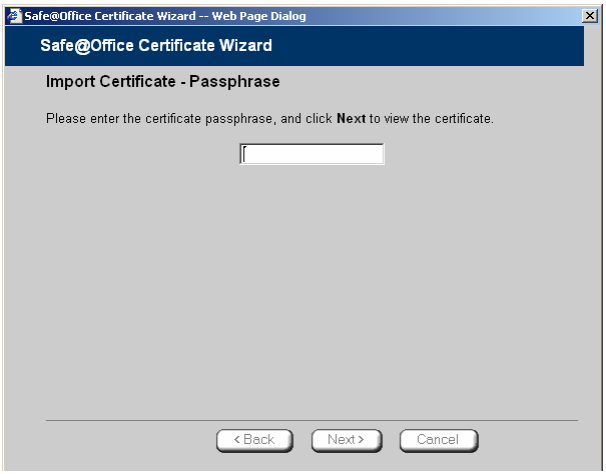
The Import Certificate dialog box appears.

4. Click Browse to open a file browser from which to locate and select the file.

   The filename that you selected is displayed.

5. Click Next.

   The Import-Certificate Passphrase dialog box appears. This may take a few moments.



6. Type the pass-phrase you received from the network security administrator.

7. Click Next.

   The Done dialog box appears, displaying the certificate's details.

8. Click Finish.

   The Safe@Office appliance installs the certificate. If a certificate is already installed, it is overwritten.

   The Certificate Wizard closes.

   The Certificates page displays the following information:

   - The gateway's certificate
   - The gateway's name
   - The gateway certificate's fingerprint
   - The CA's certificate
   - The name of the CA that issued the certificate
   - The CA certificate's fingerprint
   - The starting and ending dates between which the gateway's certificate and the CA's certificate are valid

Uninstalling a Certificate

500

If you uninstall the certificate, no certificate will exist on the Safe@Office appliance, and you will not be able to connect to the VPN if a certificate is required.

You cannot uninstall the certificate if there is a VPN site currently defined to use certificate authentication.

Note: If you want to replace a currently-installed certificate, there is no need to uninstall the certificate first. When you install the new certificate, the old certificate will be overwritten.

To uninstall a certificate

1. Click VPN in the main menu, and click the Certificate tab.

   The Certificate page appears with the name of the currently installed certificate.
2. Click Uninstall.

   A confirmation message appears.
3. Click OK.

   The certificate is uninstalled.

   A success message appears.
4. Click OK.

Viewing VPN Tunnels

500

You can view a list of currently established VPN tunnels. VPN tunnels are created and closed as follows:

- Remote Access VPN sites configured for Automatic Login and Site-to-Site VPN Gateways

  A tunnel is created whenever your computer attempts any kind of communication with a computer at the VPN site. The tunnel is closed when not in use for a period of time.

Note: Although the VPN tunnel is automatically closed, the site remains open, and if you attempt to communicate with the site, the tunnel will be reestablished.

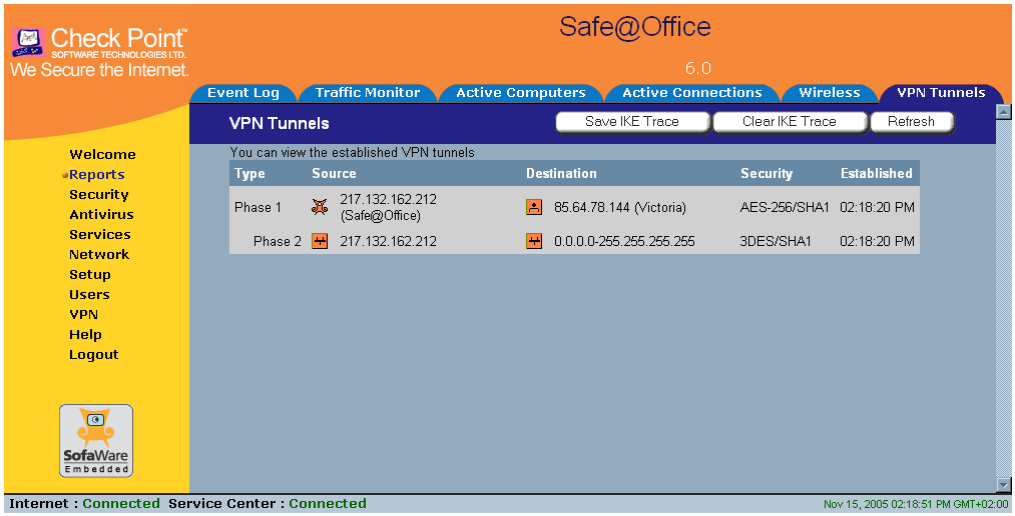
- Remote Access VPN sites configured for Manual Login

  A tunnel is created whenever your computer attempts any kind of communication with a computer at the VPN site, *after you have manually logged on to the site*. All open tunnels connecting to the site are closed when you manually log off.

To view VPN tunnels

1. Click Reports in the main menu, and click the VPN Tunnels tab.

   The VPN Tunnels page appears with a table of open tunnels to VPN sites.



   The VPN Tunnels page includes the information described in the table below.

2. To refresh the table, click Refresh.

Table 72: VPN Tunnels Page Fields

This field...	Displays...
Type	The currently active security protocol (IPSEC).
Source	The IP address or address range of the entity from which the tunnel originates. The entity's type is indicated by an icon. See ***VPN Tunnel Icons*** on page 360.

This field…	Displays…
Destination	The IP address or address range of the entity to which the tunnel is connected. The entity's type is indicated by an icon. See ***VPN Tunnel Icons*** on page 360.
Security	The type of encryption used to secure the connection, and the type of Message Authentication Code (MAC) used to verify the integrity of the message. This information is presented in the following format: Encryption type/Authentication type Note: All VPN settings are automatically negotiated between the two sites. The encryption and authentication schemes used for the connection are the strongest of those used at the two sites. Your Safe@Office appliance supports AES, 3DES, and DES encryption schemes, and MD5 and SHA authentication schemes.
Established	The time at which the tunnel was established. This information is presented in the format hh:mm:ss, where: hh=hours mm=minutes ss=seconds

Table 73: VPN Tunnels Icons

This icon…	Represents…
	This gateway

This icon…	Represents…
	A network for which an IKE Phase-2 tunnel was negotiated
	A Remote Access VPN Server
	A Site-to-Site VPN Gateway
	A remote access VPN user

Viewing IKE Traces for VPN Connections

500

If you are experiencing VPN connection problems, you can save a trace of IKE (Internet Key Exchange) negotiations to a file, and then use the free IKE View tool to view the file.

The IKE View tool is available for the Windows platform.

Note: Before viewing IKE traces, it is recommended to do the following:

- The Safe@Office appliance stores traces for all recent IKE negotiations. If you want to view only new IKE trace data, clear all IKE trace data currently stored on the Safe@Office appliance.
- Close all existing VPN tunnels except for the problematic tunnel, so as to make it easier to locate the problematic tunnel's IKE negotiation trace in the exported file.

To clear all currently-stored IKE traces

1. Click Reports in the main menu, and click the VPN Tunnels tab.

   The VPN Tunnels page appears with a table of open tunnels to VPN sites.

2. Click Clear IKE Trace.

   All IKE trace data currently stored on the Safe@Office appliance is cleared.

To view the IKE trace for a connection

1. Establish a VPN tunnel to the VPN site with which you are experiencing connection problems.

   For information on when and how VPN tunnels are established, see ***Viewing VPN Tunnels*** on page 358.

2. Click Reports in the main menu, and click the VPN Tunnels tab.

   The VPN Tunnels page appears with a table of open tunnels to VPN sites.

3. Click Save IKE Trace.

   A standard File Download dialog box appears.

4. Click Save.

   The Save As dialog box appears.

5. Browse to a destination directory of your choice.

6. Type a name for the *.elg file and click Save.

   The *.elg file is created and saved to the specified directory. This file contains the IKE traces of all currently-established VPN tunnels.

7. Use the IKE View tool to open and view the *.elg file, or send the file to technical support.

Chapter 13

Managing Users

This chapter describes how to manage Safe@Office appliance users. You can define multiple users, set their passwords, and assign them various permissions.

This chapter includes the following topics:

Changing Your Password 363
Adding and Editing Users 365
Adding Quick Guest HotSpot Users 369
Viewing and Deleting Users 371
Setting Up Remote VPN Access for Users 371
Using RADIUS Authentication 372
Configuring the RADIUS Vendor-Specific Attribute 376

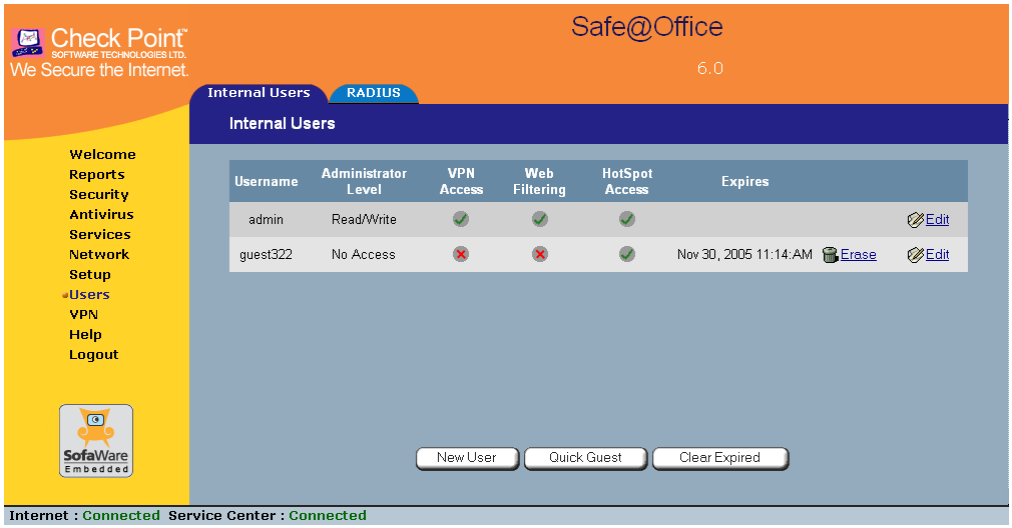
Changing Your Password

You can change your password at any time.

To change your password

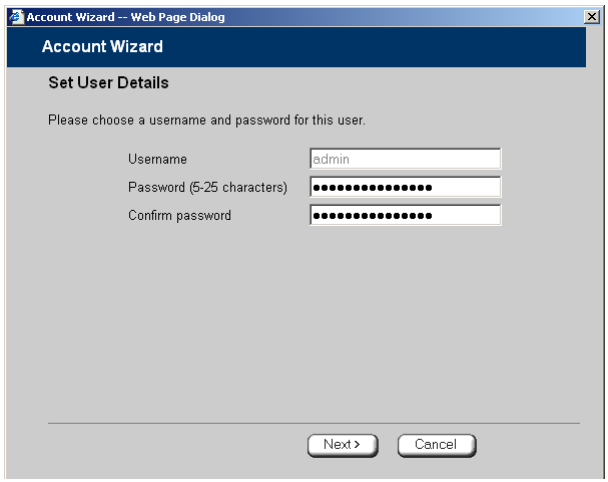
1. Click Users in the main menu, and click the Internal Users tab.

The Internal Users page appears.



2. In the row of your username, click Edit.

   The Account Wizard opens displaying the Set User Details dialog box.



3. Edit the Password and Confirm password fields.

Note: Use 5 to 25 characters (letters or numbers) for the new password.

4. Click Next.

   The Set User Permissions dialog box appears.

5. Click Finish.

   Your changes are saved.

Adding and Editing Users

500

This procedure explains how to add and edit users.

For information on quickly adding guest HotSpot users via a shortcut that the Safe@Office appliance provides, see ***Adding Quick Guest HotSpot Users*** on page 369.

To add or edit a user

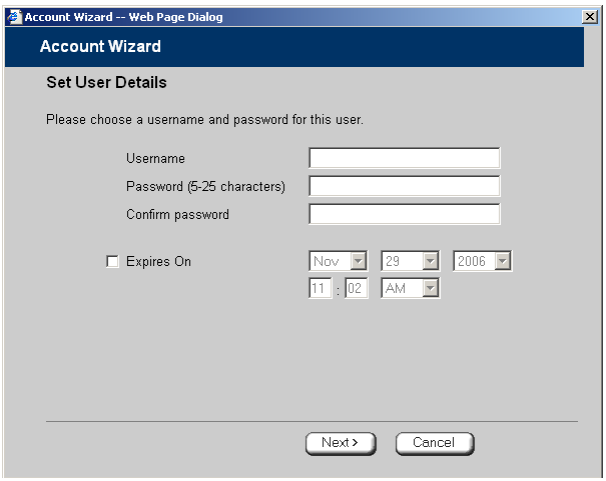
1. Click Users in the main menu, and click the Internal Users tab.

The Internal Users page appears.

2. Do one of the following:

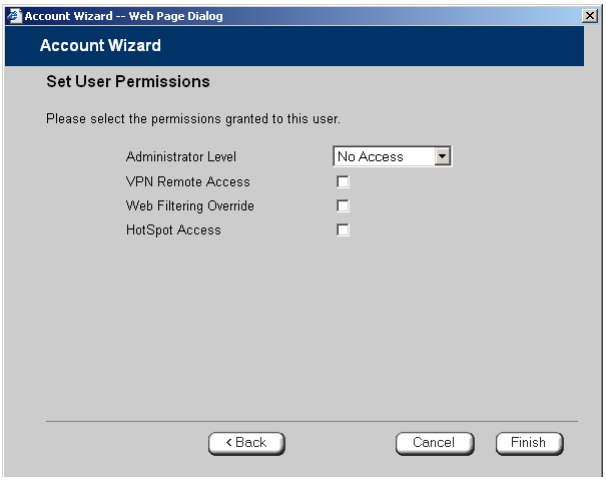
   - To create a new user, click New User.
   - To edit an existing user, click Edit next to the desire user.

   The Account Wizard opens displaying the Set User Details dialog box.



3. Complete the fields using the information in ***Set User Details Fields*** on page 367.
4. Click Next.

The Set User Permissions dialog box appears.



The options that appear on the page are dependant on the software and services you are using.

5. Complete the fields using the information in ***Set User Permissions Fields*** on page 368.
6. Click Finish.

   The user is saved.

Table 74: Set User Details Fields

In this field…	Do this…
Username	Enter a username for the user.
Password	Enter a password for the user. Use five to 25 characters (letters or numbers) for the new password.
Confirm Password	Re-enter the user's password.

In this field…	Do this…
Expires On	To specify an expiration time for the user, select this option and specify the expiration date and time in the fields provided. When the user account expires, it is locked, and the user can no longer log on to the Safe@Office appliance. If you do not select this option, the user will not expire.

Table 75: Set User Permissions Fields

In this field...	Do this...
Administrator Level	Select the user's level of access to the Safe@Office Portal. The levels are: • No Access: The user cannot access the Safe@Office Portal. • Read/Write: The user can log on to the Safe@Office Portal and modify system settings. • Read Only: The user can log on to the Safe@Office Portal, but cannot modify system settings or export the appliance configuration via the Setup>Tools page. For example, you could assign this administrator level to technical support personnel who need to view the Event Log. The default level is No Access. The "admin" user's Administrator Level (Read/Write) cannot be changed.
VPN Remote Access	Select this option to allow the user to connect to this Safe@Office appliance using their VPN client. For further information on setting up VPN remote access, see ***Setting Up Remote VPN Access for Users*** on page 371.

Web Filtering Override	Select this option to allow the user to override Web Filtering. This option only appears if the Web Filtering service is defined. This option cannot be changed for the “admin” user.
HotSpot Access	Select this option to allow the user to log on to the My HotSpot page. For information on Secure HotSpot, see ***Configuring Secure HotSpot*** on page 258. This option only appears in Safe@Office 500 with Power Pack.

Adding Quick Guest HotSpot Users

Power Pack

The Safe@Office appliance provides a shortcut for quickly adding a guest HotSpot user. This is useful in situations where you want to grant temporary network access to guests, for example in an Internet café. The shortcut also enables printing the guest user's details in one click.

By default, the quick guest user has the following characteristics:

- Username in the format `guest<number>`, where `<number>` is a unique three-digit number.

  For example: guest123
- Randomly generated password
- Expires in 24 hours
- Administration Level: No Access
- Permissions: HotSpot Access only

For information on configuring Secure HotSpot, see ***Using Secure HotSpot*** on page 258.

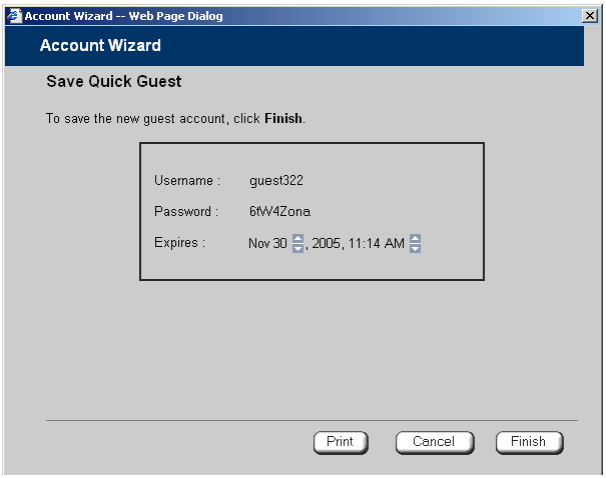
To quickly create a guest user

1. Click Users in the main menu, and click the Internal Users tab.

   The Internal Users page appears.

2. Click Quick Guest.

   The Account Wizard opens displaying the Save Quick Guest dialog box.



3. In the Expires field, click on the arrows to specify the expiration date and time.
4. To print the user details, click Print.
5. Click Finish.

   The guest user is saved.

   You can edit the guest user's details and permissions using the procedure ***Adding and Editing Users*** on page 365.

Viewing and Deleting Users

500

Note: The “admin” user cannot be deleted.

To view or delete users

1. Click Users in the main menu, and click the Internal Users tab.

   The Internal Users page appears with a list of all users and their permissions.

   The expiration time of expired users appears in red.

2. To delete a user, do the following:

   a) In the desired user’s row, click the Erase icon.

      A confirmation message appears.

   b) Click OK.

      The user is deleted.

3. To delete all expired users, do the following:

   a) Click Clear Expired.

      A confirmation message appears.

   b) Click OK.

      The expired users are deleted.

Setting Up Remote VPN Access for Users

500

If you are using your Safe@Office appliance as a Remote Access VPN Server or as an internal VPN Server, you can allow users to access it remotely through their

Remote Access VPN Clients (a Check Point SecureClient, Check Point SecuRemote, or another Embedded NGX appliance).

To set up remote VPN access for a user

1. Enable your VPN Server, using the procedure ***Setting Up Your Safe@Office Appliance as a VPN Server*** on page 309.
2. Add or edit the user, using the procedure ***Adding and Editing Users*** on page 365.

   You must select the VPN Remote Access option.

Using RADIUS Authentication

500

You can use Remote Authentication Dial-In User Service (RADIUS) to authenticate both Safe@Office appliance users and Remote Access VPN Clients trying to connect to the Safe@Office appliance.

Note: When RADIUS authentication is in use, Remote Access VPN Clients must have a certificate.

When a user tries to log on to the Safe@Office Portal, the Safe@Office appliance sends the entered user name and password to the RADIUS server. The server then checks whether the RADIUS database contains a matching user name and password pair. If so, then the user is logged on.

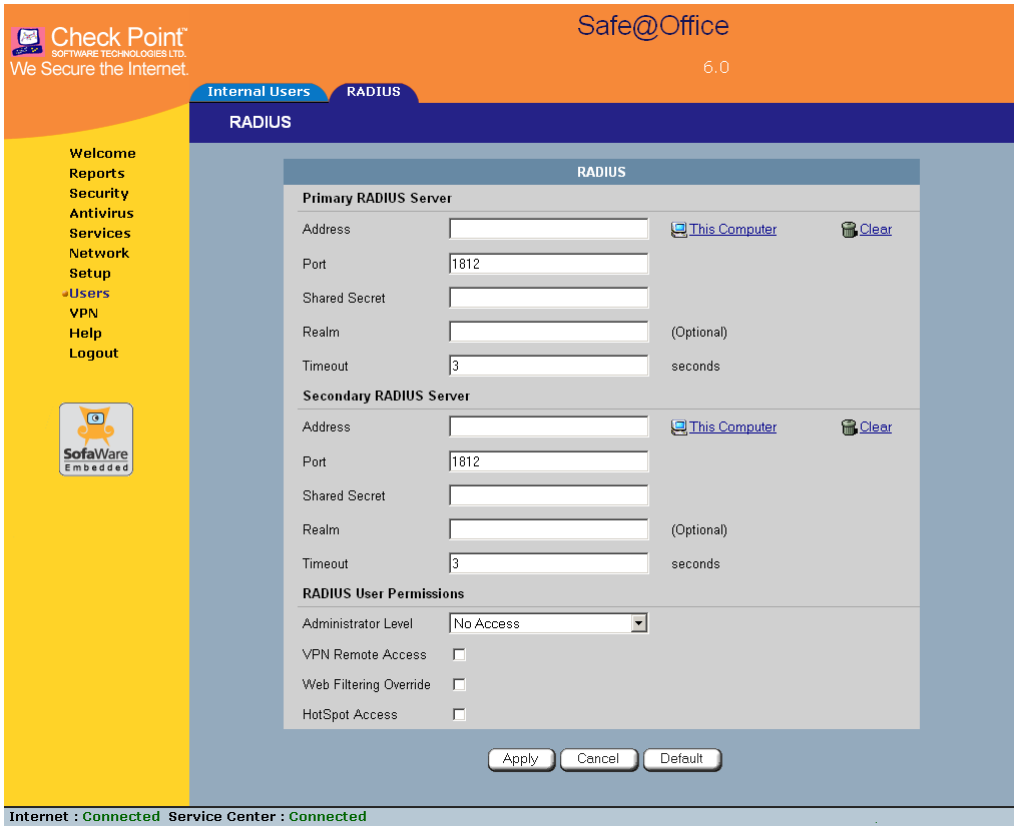
By default, all RADIUS-authenticated users are assigned the set of permissions specified in the Safe@Office Portal's RADIUS page. However, you can configure the RADIUS server to pass the Safe@Office appliance a specific set of permissions to grant the authenticated user, instead of these default permissions. This is done by configuring the RADIUS Vendor-Specific Attribute (VSA) with a set of attributes containing permission information for specific users. If the VSA is configured for a user, then the RADIUS server passes the VSA to the Embedded NGX gateway as part of the response to the authentication request, and the gateway assigns the user permissions as specified in the VSA. If the VSA is not returned by the RADIUS

server for a specific user, the gateway will use the default permission set for this user.

To use RADIUS authentication

1. Click Users in the main menu, and click the RADIUS tab.

   The RADIUS page appears.



2. Complete the fields using the table below.
3. Click Apply.
4. To restore the default RADIUS settings, do the following:

   a) Click Default.

A confirmation message appears.

b) Click OK.

The RADIUS settings are reset to their defaults. For information on the default values, refer to the table below.

5. To use the RADIUS VSA to assign permissions to users, configure the VSA.

See ***Configuring the RADIUS Vendor-Specific Attribute*** on page 376.

Table 76: RADIUS Page Fields

In this field…	Do this…
Primary/Secondary RADIUS Server	Configure the primary and secondary RADIUS servers. By default, the Safe@Office appliance sends a request to the primary RADIUS server first. If the primary RADIUS server does not respond after three attempts, the Safe@Office appliance will send the request to the secondary RADIUS server.
Address	Type the IP address of the computer that will run the RADIUS service (one of your network computers) or click the corresponding This Computer button to allow your computer to host the service. To clear the text box, click Clear.
Port	Type the port number on the RADIUS server's host computer. The default port number is 1812.
Shared Secret	Type the shared secret to use for secure communication with the RADIUS server.

In this field…	Do this…
Realm	If your organization uses RADIUS realms, type the realm to append to RADIUS requests. The realm will be appended to the username as follows: <username>@<realm> For example, if you set the realm to “myrealm”, and the user "JohnS" attempts to log on to the Safe@Office Portal, the Safe@Office appliance will send the RADIUS server an authentication request with the username “JohnS@myrealm”. This field is optional.
Timeout	Type the interval of time in seconds between attempts to communicate with the RADIUS server. The default value is 3 seconds.
RADIUS User Permissions	If the RADIUS VSA (Vendor-Specific Attribute) is configured for a user, the fields in this area will have no effect, and the user will be granted the permissions specified in the VSA. If the VSA is not configured for the user, the permissions configured in this area will be used.
Administrator Level	Select the level of access to the Safe@Office Portal to assign to all users authenticated by the RADIUS server. The levels are: • No Access: The user cannot access the Safe@Office Portal • Read/Write: The user can log on to the Safe@Office Portal and modify system settings. • Read Only: The user can log on to the Safe@Office Portal, but cannot modify system settings. The default level is No Access.

In this field…	Do this…
Web Filtering Override	Select this option to allow all users authenticated by the RADIUS server to override Web Filtering. This option only appears if the Web Filtering service is defined.
HotSpot Access	Select this option to allow the user to access the My HotSpot page. This option only appears in Safe@Office 500 with Power Pack.

Configuring the RADIUS Vendor-Specific Attribute

500

For detailed instructions and examples, refer to the "Configuring the RADIUS Vendor-Specific Attribute" white paper.

To assign permissions to specific RADIUS-authenticated users

1. Create a remote access policy as follows:
   a) Assign the policy's VSA (attribute 26) the SofaWare vendor code (6983).
   b) For each permission you want to grant, configure the relevant attribute of the VSA with the desired value, as described in the table below.

   For example, to assign the user VPN access permissions, set attribute number 2 to "true".
2. Assign the policy to the desired user or user group.

Table 77: VSA Syntax

Permission	Description	Attribute Number	Attribute Format	Attribute Values	Notes
Admin	Indicates the administrator's level of access to the Embedded NGX Portal	1	String	none. The user cannot access the Safe@Office Portal. readonly. The user can log on to the Safe@Office Portal, but cannot modify system settings. readwrite. The user can log on to the Safe@Office Portal and modify system settings.	
VPN	Indicates whether the user can access the network from a Remote Access VPN Client.	2	String	true. The user can remotely access the network via VPN. false. The user cannot remotely access the network via VPN.	This permission is only relevant if the Safe@Office Remote Access VPN Server is enabled. The gateway must have a certificate.

Permission	Description	Attribute Number	Attribute Format	Attribute Values	Notes
Hotspot	Indicates whether the user can log on via the My HotSpot page.	3	String	**true**. The user can access the Internet via My HotSpot. **false**. The user cannot access the Internet via My HotSpot.	This permission is only relevant if the Secure HotSpot feature is enabled.
UFP	Indicates whether the user can override Web Filtering.	4	String	**true**. The user can override Web Filtering. **false**. The user cannot override Web Filtering.	This permission is only relevant if the Web Filtering service is enabled.

Chapter 14

Maintenance

This chapter describes the tasks required for maintenance and diagnosis of your Safe@Office appliance.

This chapter includes the following topics:

Viewing Firmware Status 379
Updating the Firmware 381
Upgrading Your Software Product 383
Registering Your Safe@Office Appliance 387
Configuring Syslog Logging 388
Controlling the Appliance via the Command Line 390
Configuring HTTPS 394
Configuring SSH 396
Configuring SNMP 398
Setting the Time on the Appliance 401
Using Diagnostic Tools 405
Backing Up the Safe@Office Appliance Configuration 419
Resetting the Safe@Office Appliance to Defaults 422
Running Diagnostics 425
Rebooting the Safe@Office Appliance 426

Viewing Firmware Status

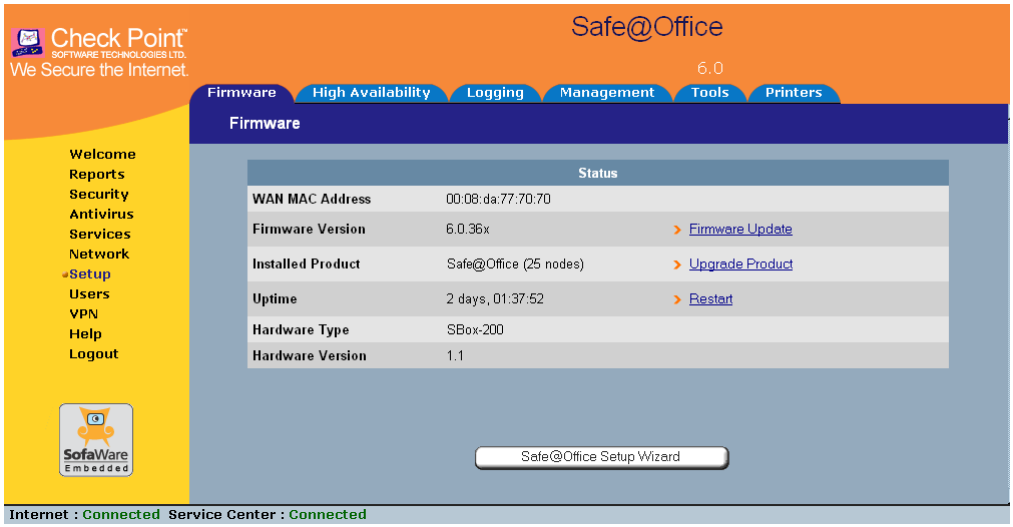
The firmware is the software program embedded in the Safe@Office appliance.

You can view your current firmware version and additional details.

To view the firmware status

- Click Setup in the main menu, and click the Firmware tab.

  The Firmware page appears.



  The Firmware page displays the following information:

Table 78: Firmware Status Fields

This field…	Displays…	For example…
WAN MAC Address	The MAC address used for the Internet connection	00:80:11:22:33:44
Firmware Version	The current version of the firmware	6.0
Installed Product	The licensed software and the number of allowed nodes	Safe@Office 500 unlimited nodes

This field…	Displays…	For example…
Uptime	The time that elapsed from the moment the unit was turned on	01:21:15
Hardware Type	The type of the current Safe@Office appliance hardware	Sbox-500
Hardware Version	The current hardware version of the Safe@Office appliance	1.0

Updating the Firmware

500

If you are subscribed to Software Updates, firmware updates are performed automatically. These updates include new product features and protection against new security threats. Check with your reseller for the availability of Software Updates and other services. For information on subscribing to services, see ***Connecting to a Service Center*** on page 283.

If you are not subscribed to the Software Updates service, you must update your firmware manually.

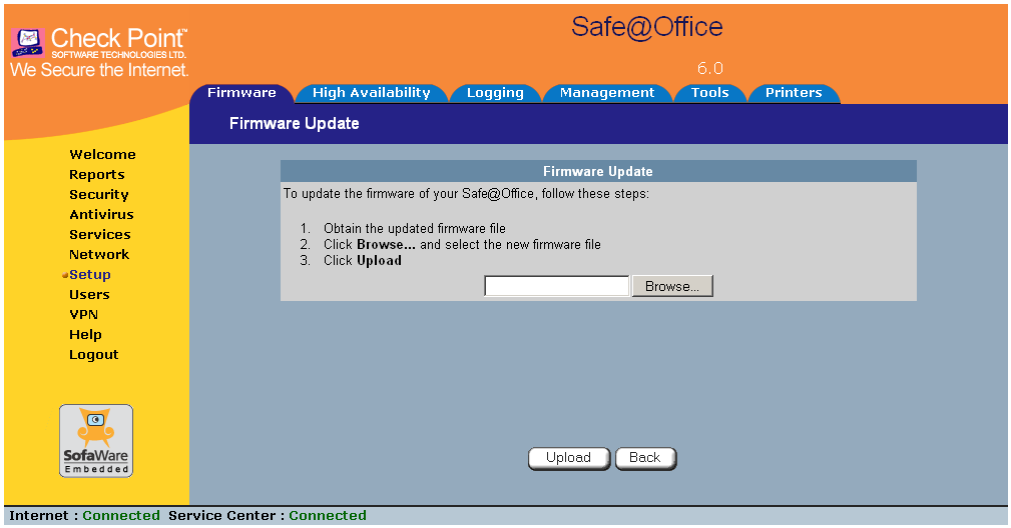
To update your Safe@Office firmware manually

1. Click Setup in the main menu, and click the Firmware tab.

   The Firmware page appears.

2. Click Firmware Update.

The Firmware Update page appears.



3. Click Browse.

   A browse window appears.

4. Select the image file and click Open.

   The Firmware Update page reappears. The path to the firmware update image file appears in the Browse text box.

5. Click Upload.

   Your Safe@Office appliance firmware is updated.

   Updating may take a few minutes, during which time the PWR/SEC LED may start flashing red or orange. Do not power off the appliance.

   At the end of the process the Safe@Office appliance restarts automatically.

Upgrading Your Software Product

500

You can upgrade your Safe@Office 500 appliance by adding the Safe@Office 500 Power Pack. After purchasing the Power Pack, you will receive a new Product Key that enables you to use the Power Pack on the same Safe@Office appliance you have today. There is no need to replace your hardware. You can also purchase node upgrades, as needed.

Note: To purchase the Power Pack or node upgrades, contact your Safe@Office appliance provider.

To upgrade your product, you must install the new Product Key.

To install a Product Key

1. Click Setup in the main menu, and click the Firmware tab.

   The Firmware page appears.

2. Click Upgrade Product.

The Safe@Office Licensing Wizard opens, with the Install Product Key dialog box displayed.

3. Click Enter a different Product Key.
4. In the Product Key field, enter the new Product Key.
5. Click Next.

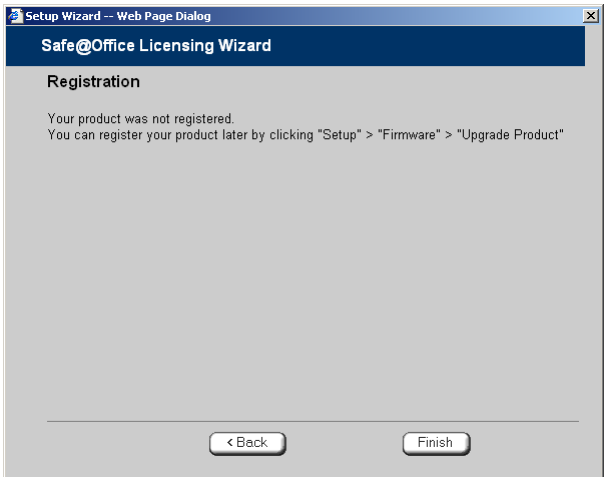
   The Installed New Product Key dialog box appears.

6. Click Next.

The first Registration dialog box appears.

7. Do one of the following:

   - To register your Safe@Office appliance later on, clear the I want to register my product check box and then click Next.



   - To register your Safe@Office appliance now, do the following:

     1) Click Next.

A second Registration dialog box appears.

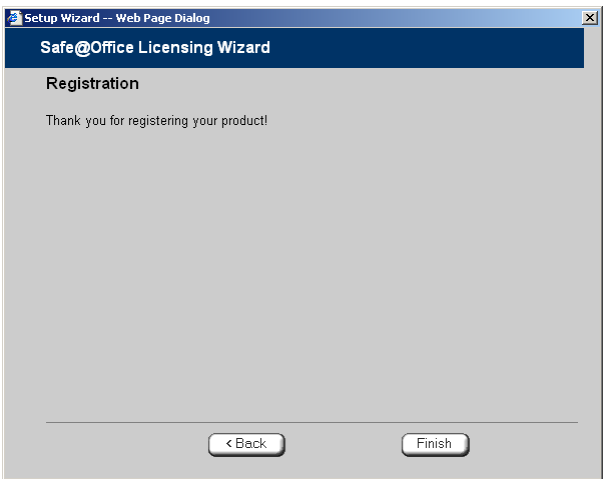
2) Enter your contact information in the appropriate fields.

3) To receive email notifications regarding new firmware versions and services, select the check box.

4) Click Next.

   The Registration... screen appears.

   The third Registration dialog box appears.



8. Click Finish.

   Your Safe@Office appliance is restarted and the Welcome page appears.

Registering Your Safe@Office Appliance

500

If you want to activate your warranty and optionally receive notifications of new firmware versions and services, you must register your Safe@Office appliance.

Privacy Statement: Check Point is committed to protecting your privacy. We use the information we collect about you to process orders and to improve our ability to serve your needs. We will under no circumstances sell, lease, or otherwise disclose any of your personal or contact details without your explicit permission.

To register your Safe@Office appliance

1. Click Setup in the main menu, and click the Firmware tab.

   The Firmware page appears.

2. Click Upgrade Product.

   The Safe@Office Licensing Wizard opens, with the Install Product Key dialog box displayed.

3. Select Keep these settings.

4. Click Next.

   The first Registration dialog box appears.

5. Verify that the I want to register my product check box is selected.

6. Click Next.

   A second Registration dialog box appears.

7. Enter your contact information in the appropriate fields.

8. To receive email notifications regarding new firmware versions and services, select the check box.

9. Click Next.

   The Registration... screen appears.

   The third Registration dialog box appears.

10. Click Finish.

    Your Safe@Office appliance is restarted and the Welcome page appears.

Configuring Syslog Logging

500

You can configure the Safe@Office appliance to send event logs to a Syslog server residing in your internal network or on the Internet. The logs detail the date and the time each event occurred. If the event is a communication attempt that was rejected by the firewall, the event details include the source and destination IP address, the destination port, and the protocol used for the communication attempt (for example, TCP or UDP).

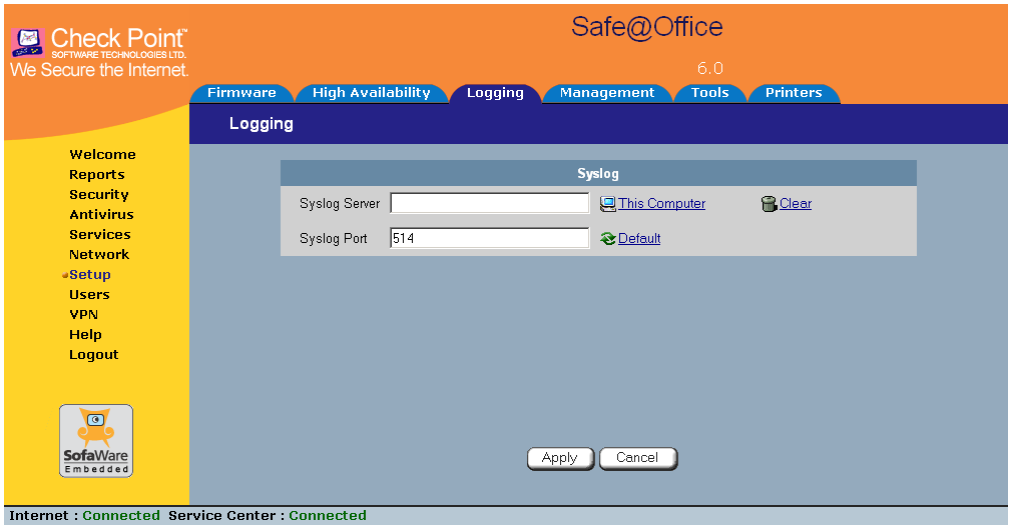
This same information is also available in the Event Log page (see ***Viewing the Event Log*** on page 189). However, while the Event Log can display hundreds of logs, a Syslog server can store an unlimited number of logs. Furthermore, Syslog servers can provide useful tools for managing your logs.

Note: Kiwi Syslog Daemon is freeware and can be downloaded from http://www.kiwisyslog.com. For technical support, contact Kiwi Enterprises.

To configure Syslog logging

1. Click Setup in the main menu, and click the Logging tab.

The Logging page appears.



2. Complete the fields using the information in the table below.
3. Click Apply.

Table 79: Logging Page Fields

In this field…	Do this…
Syslog Server	Type the IP address of the computer that will run the Syslog service (one of your network computers), or click This Computer to allow your computer to host the service.
Clear	Click to clear the Syslog Server field.
Syslog Port	Type the port number of the Syslog server.
Default	Click to reset the Syslog Port field to the default (port 514 UDP).

Controlling the Appliance via the Command Line

500

Depending on your Safe@Office model, you can control your appliance via the command line in the following ways:

- Using the Safe@Office Portal's command line interface.

  See ***Using the Safe@Office Portal*** on page 390.

- Using a console connected to the Safe@Office appliance.

  For information, see ***Using the Serial Console*** on page 392.

- Using an SSH client.

  See ***Configuring SSH*** on page 396.

Using the Safe@Office Portal

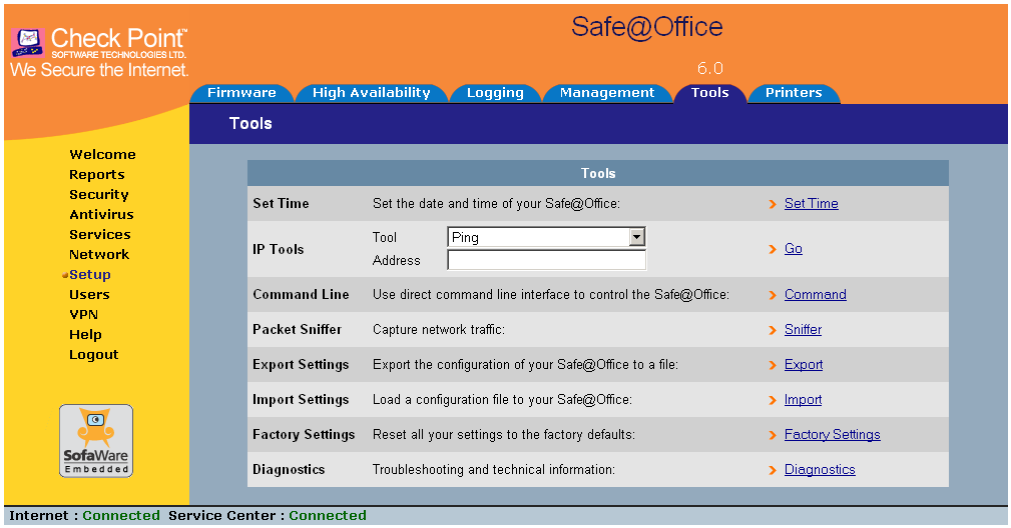
500

You can control your appliance via the Safe@Office Portal's command line interface.

To control the appliance via the Safe@Office Portal

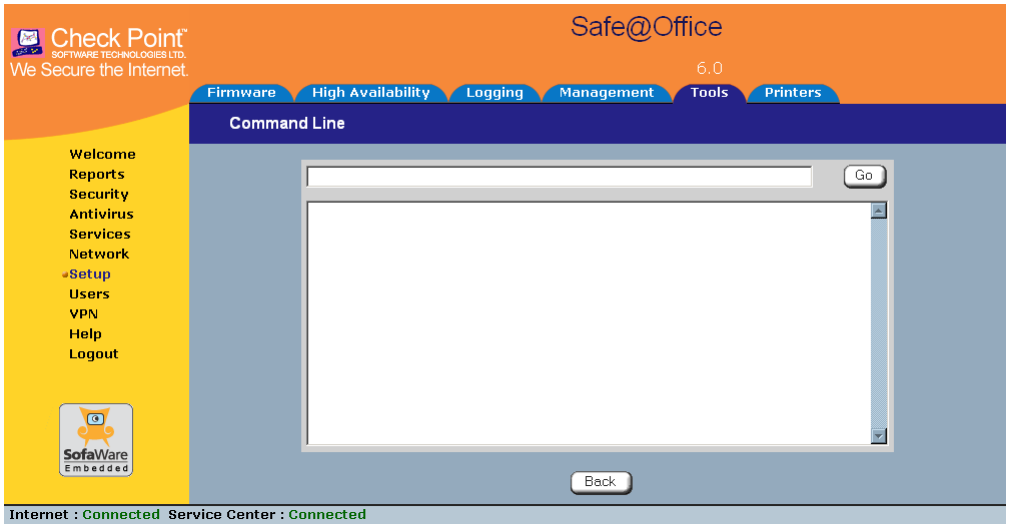
1. Click Setup in the main menu, and click the Tools tab.

The **Tools** page appears.



2. Click **Command**.

   The **Command Line** page appears.



3. In the upper field, type a command.

   You can view a list of supported commands using the command help.

   For information on all commands, refer to the *Embedded NGX CLI Reference Guide*.

4. Click Go.

   The command is implemented.

Using the Serial Console

500

You can connect a console to the Safe@Office appliance, and use the console to control the appliance via the command line.

Note: Your terminal emulation software must be set to 57600 bps, N-8-1.

To control the appliance via a console

1. Connect the serial console to your Safe@Office appliance's serial port, using an RS-232 Null modem cable.

   For information on locating the serial port, see Rear Panel.

2. Click Network in the main menu, and click the Ports tab.

The Ports page appears.

3. In the RS232 drop-down list, select Console.
4. Click Apply.

   You can now control the Safe@Office appliance from the serial console.

   For information on all supported commands, refer to the *Embedded NGX CLI Reference Guide*.

Configuring HTTPS

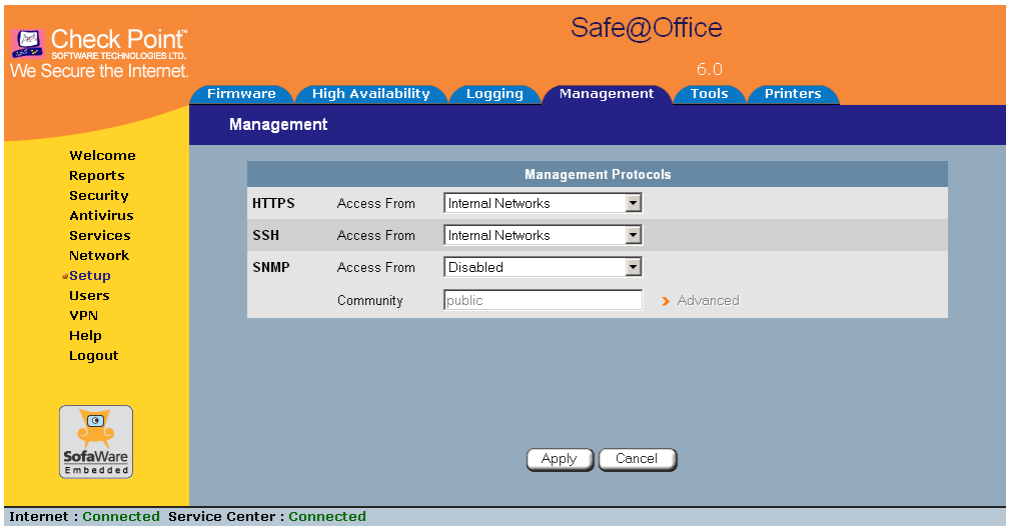
500

You can enable Safe@Office appliance users to access the Safe@Office Portal from the Internet. To do so, you must first configure HTTPS.

To configure HTTPS

1. Click Setup in the main menu, and click the Management tab.

   The Management page appears.



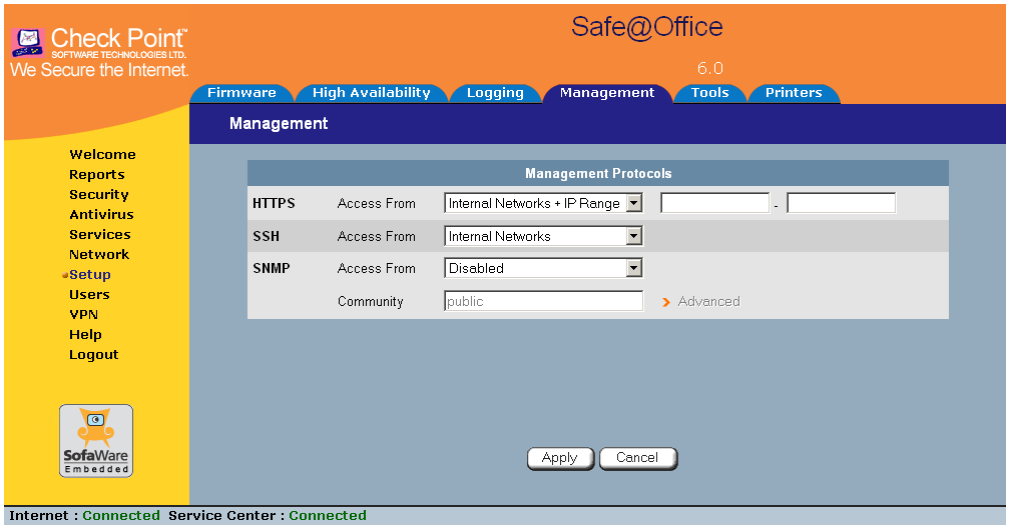
2. Specify from where HTTPS access to the Safe@Office Portal should be granted.

   See ***Access Options*** on page 395 for information.

Warning: If remote HTTPS is enabled, your Safe@Office appliance settings can be changed remotely, so it is especially important to make sure all Safe@Office appliance users' passwords are difficult to guess.

Note: You can use HTTPS to access the Safe@Office Portal from your internal network, by surfing to https://my.firewall.

If you selected IP Address Range, additional fields appear.



3. If you selected IP Address Range, enter the desired IP address range in the fields provided.
4. Click Apply.

   The HTTPS configuration is saved. If you configured remote HTTPS, you can now access the Safe@Office Portal through the Internet, using the procedure ***Accessing the Safe@Office Portal Remotely*** on page 46.

Table 80: Access Options

Select this option…	To allow access from…
Internal Network	The internal network only. This disables remote access capability.

Select this option…	To allow access from…
Internal Network and VPN	The internal network and your VPN.
IP Address Range	A particular range of IP addresses. Additional fields appear, in which you can enter the desired IP address range.
ANY	Any IP address.
Disabled	Nowhere. This completely disables access. This option is only available for SNMP.

Configuring SSH

500

Safe@Office appliance users can control the appliance via the command line, using the SSH (Secure Shell) management protocol. You can enable users to do so via the Internet, by configuring remote SSH access. You can also integrate the Safe@Office appliance with SSH-based management systems.

Note: The Safe@Office appliance supports SSHv2 clients only. The SSHv1 protocol contains security vulnerabilities and is not supported.

To configure SSH

1. Click Setup in the main menu, and click the Management tab.

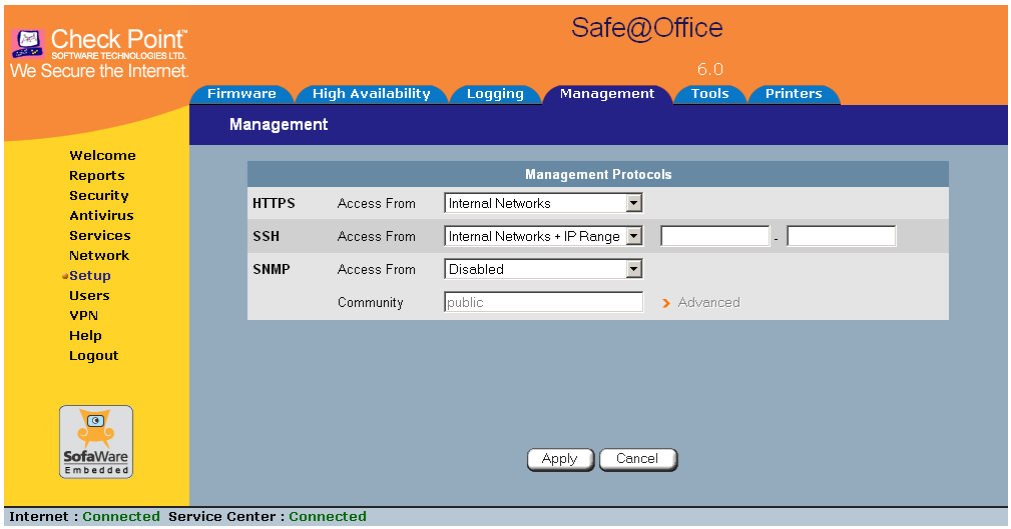
   The Management page appears.

2. Specify from where SSH access should be granted.

See ***Access Options*** on page 395 for information.

Warning: If remote SSH is enabled, your Safe@Office appliance settings can be changed remotely, so it is especially important to make sure all Safe@Office appliance users' passwords are difficult to guess.

If you selected IP Address Range, additional fields appear.



3. If you selected IP Address Range, enter the desired IP address range in the fields provided.
4. Click Apply.

   The SSH configuration is saved. If you configured remote SSH access, you can now control the Safe@Office appliance from the Internet, using an SSHv2 client.

   For information on all supported commands, refer to the *Embedded NGX CLI Reference Guide*.

Configuring SNMP

The Safe@Office appliance users can monitor the Safe@Office appliance, using tools that support SNMP (Simple Network Management Protocol). You can enable users can do so via the Internet, by configuring remote SNMP access.

The Safe@Office appliance supports the following SNMP MIBs:

- SNMPv2-MIB
- RFC1213-MIB
- IF-MIB
- IP-MIB

All SNMP access is read-only.

To configure SNMP

1. Click Setup in the main menu, and click the Management tab.

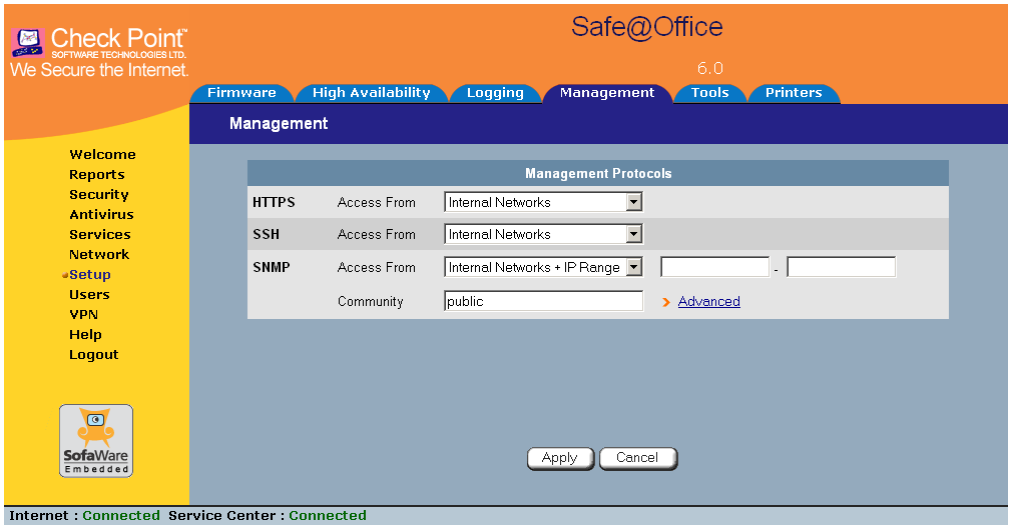
   The Management page appears.

2. Specify from where SNMP access should be granted.

   See ***Access Options*** on page 395 for information.

   If you selected IP Address Range, additional fields appear.

The Community field and the Advanced link are enabled.

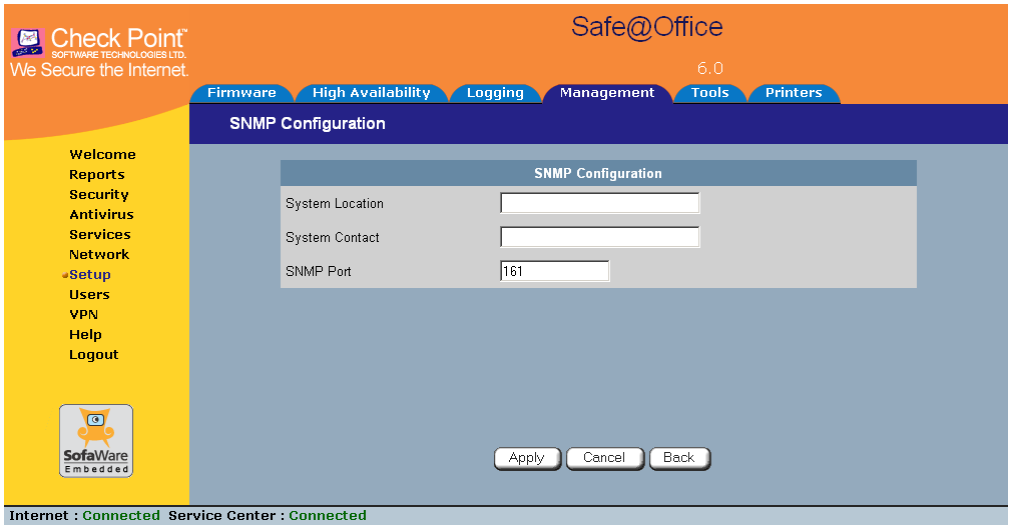


3. If you selected IP Address Range, enter the desired IP address range in the fields provided.
4. In the Community field, type the name of the SNMP community string.

   SNMP clients uses the SNMP community string as a password, when connecting to the Safe@Office appliance.

   The default value is "public". It is recommended to change this string.
5. To configure advanced SNMP settings, click Advanced.

The SNMP Configuration page appears.



6. Complete the fields using the table below.
7. Click Apply.

   The SNMP configuration is saved.
8. Configure the SNMP clients with the SNMP community string.

Table 81: Advanced SNMP Settings

In this field...	Do this...
System Location	Type a description of the appliance's location. This information will be visible to SNMP clients, and is useful for administrative purposes.
System Contact	Type the name of the contact person. This information will be visible to SNMP clients, and is useful for administrative purposes.

In this field...	Do this...
SNMP Port	Type the port to use for SNMP. The default port is 161.

Setting the Time on the Appliance

500

You set the time displayed in the Safe@Office Portal during initial appliance setup. If desired, you can change the date and time using the procedure below.

To set the time

1. Click Setup in the main menu, and click the Tools tab.

   The Tools page appears.

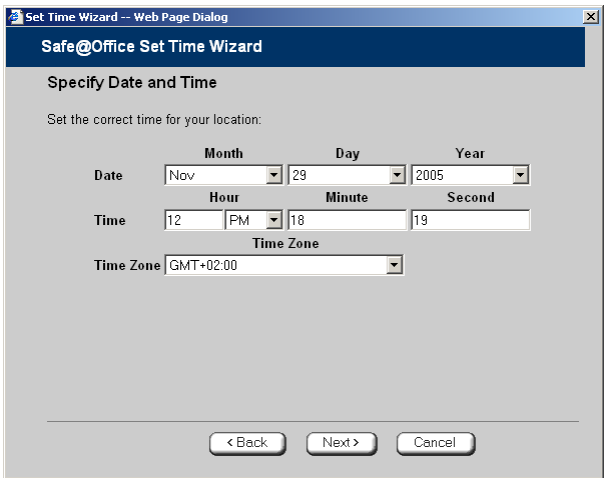
2. Click Set Time.

   The Safe@Office Set Time Wizard opens displaying the Set the Safe@Office Time dialog box.

3. Complete the fields using the information in ***Set Time Wizard Fields*** on page 404.
4. Click Next.

   The following things happen in the order below:

   - If you selected Specify date and time, the Specify Date and Time dialog box appears.

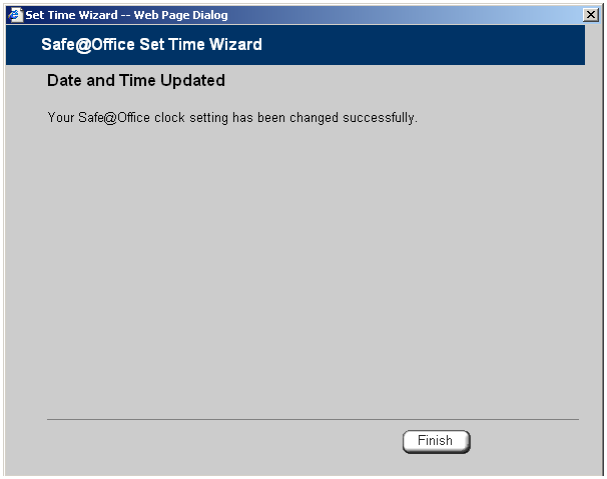


   Set the date, time, and time zone in the fields provided, then click Next.

- If you selected Use a Time Server, the Time Servers dialog box appears.

Complete the fields using the information in ***Time Servers Fields*** on page 404, then click Next.

- The Date and Time Updated screen appears.



5. Click Finish.

Table 82: Set Time Wizard Fields

Select this option…	To do the following…
Your computer's clock	Set the appliance time to your computer's system time. Your computer's system time is displayed to the right of this option.
Keep the current time	Do not change the appliance's time. The current appliance time is displayed to the right of this option.
Use a Time Server	Synchronize the appliance time with a Network Time Protocol (NTP) server.
Specify date and time	Set the appliance to a specific date and time.

Table 83: Time Servers Fields

In this field…	Do this…
Primary Server	Type the IP address of the Primary NTP server.
Secondary Server	Type the IP address of the Secondary NTP server. This field is optional.
Clear	Clear the field.
Select your time zone	Select the time zone in which you are located.

Using Diagnostic Tools

The Safe@Office appliance is equipped with a set of diagnostic tools that are useful for troubleshooting Internet connectivity.

Table 84: Diagnostic Tools

Use this tool…	To do this…	For information, see…
Ping	Check that a specific IP address or DNS name can be reached via the Internet.	***Using IP Tools*** on page 406
Traceroute	Display a list of all routers used to connect from the Safe@Office appliance to a specific IP address or DNS name.	***Using IP Tools*** on page 406
WHOIS	Display the name and contact information of the entity to which a specific IP address or DNS name is registered. This information is useful in tracking down hackers.	***Using IP Tools*** on page 406
Packet Sniffer	Capture network traffic. This information is useful troubleshooting network problems.	***Using Packet Sniffer*** on page 408

Using IP Tools

500

To use an IP tool

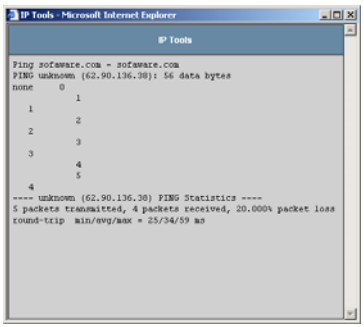
1. Click Setup in the main menu, and click the Tools tab.

   The Tools page appears.
2. In the IP Tools drop-down list, select the desired tool.
3. In the Address field, type the IP address or DNS name for which to run the tool.
4. Click Go.

   - If you selected Ping, the following things happen:

     The Safe@Office appliance sends packets to the specified the IP address or DNS name.

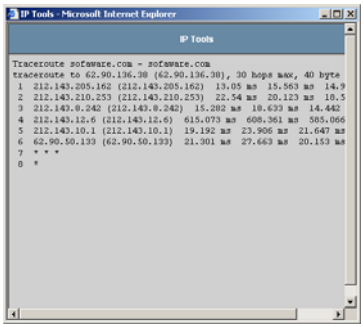
     The IP Tools window opens and displays the percentage of packet loss and the amount of time it each packet took to reach the specified host and return (round-trip) in milliseconds.

   - If you selected Traceroute, the following things happen:

     The Safe@Office appliance connects to the specified IP address or DNS name.

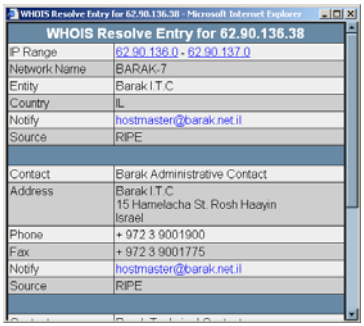
The IP Tools window opens and displays a list of routers used to make the connection.



- If you selected WHOIS, the following things happen:

  The Safe@Office appliance queries the Internet WHOIS server.

  A window displays the name of the entity to which the IP address or DNS name is registered and their contact information.



Using Packet Sniffer

500

The Safe@Office appliance includes the Packet Sniffer tool, which enables you to capture packets from any internal network or Safe@Office port. This is useful for troubleshooting network problems and for collecting data about network behavior.

The Safe@Office appliance saves the captured packets to a file on your computer. You can use a free protocol analyzer, such as Ethereal, to analyze the file, or you can send it to technical support. Ethereal runs on all popular computing platforms and can be downloaded from http://www.ethereal.com.

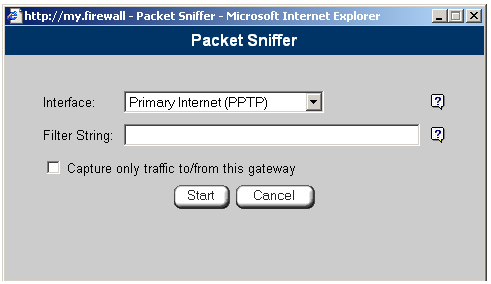
To use Packet Sniffer

1. Click Setup in the main menu, and click the Tools tab.

   The Tools page appears.

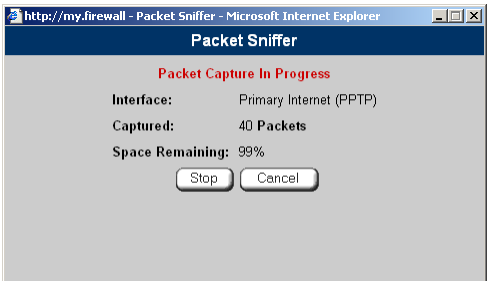
2. Click Sniffer.

   The Packet Sniffer window opens.



3. Complete the fields using the information in the table below.
4. Click Start.

The Packet Sniffer window displays the name of the interface, the number of packets collected, and the percentage of storage space remaining on the appliance for storing the packets.



5. Click Stop to stop collecting packets.

   A standard File Download dialog box appears.

6. Click Save.

   The Save As dialog box appears.

7. Browse to a destination directory of your choice.
8. Type a name for the configuration file and click Save.

   The *.cap file is created and saved to the specified directory.

9. Click Cancel to close the Packet Sniffer window.

Table 85: Packet Sniffer Fields

In this field…	Do this…
Interface	Select the interface from which to collect packets. The list includes the primary Internet connection, the Safe@Office appliance ports, and all defined networks.
Filter String	Type the filter string to use for filtering the captured packets. Only packets that match the filter condition will be saved. For a list of basic filter strings elements, see ***Filter String Syntax*** on page 411. For detailed information on filter syntax, go to http://www.tcpdump.org/tcpdump_man.html. Note: Do not enclose the filter string in quotation marks. If you do not specify a filter string, Packet Sniffer will save all packets on the selected interface.
Capture only traffic to/from this gateway	Select this option to capture incoming and outgoing packets for this gateway only. If this option is not selected, Packet Sniffer will collect packets for all traffic on the interface.

Filter String Syntax

The following represents a list of basic filter string elements:

- ***and*** on page 411
- ***dst*** on page 412
- ***dst port*** on page 412
- ***ether proto*** on page 413
- ***host*** on page 414
- ***not*** on page 414
- ***or*** on page 415
- ***port*** on page 415
- ***src*** on page 416
- ***src port*** on page 416
- ***tcp*** on page 417
- ***udp*** on page 418

For detailed information on filter syntax, refer to http://www.tcpdump.org.

and

PURPOSE

The and element is used to concatenate filter string elements. The filtered packets must match *all* concatenated filter string elements.

SYNTAX

element and element [and element...]

element && element [&& element...]

PARAMETERS

`element`	String. A filter string element.

EXAMPLE

The following filter string saves packets that both originate from IP address is 192.168.10.1 and are destined for port 80:

```
src 192.168.10.1 and dst port 80
```

dst

PURPOSE

The `dst` element captures all packets with a specific destination.

SYNTAX

dst *destination*

PARAMETERS

`destination`	IP Address or String. The computer to which the packet is sent. This can be the following: • An IP address • A host name

EXAMPLE

The following filter string saves packets that are destined for the IP address 192.168.10.1:

```
dst 192.168.10.1
```

dst port

PURPOSE

The `dst port` element captures all packets destined for a specific port.

SYNTAX

dst port *port*

Note: This element can be prepended by tcp or udp. For information, see ***tcp*** on page 417 and ***udp*** on page 418.

PARAMETERS

`port`	Integer. The port to which the packet is sent.

EXAMPLE

The following filter string saves packets that are destined for port 80:

```
dst port 80
```

ether proto

PURPOSE

The `ether proto` element is used to capture packets of a specific ether protocol type.

SYNTAX

ether proto *protocol*

PARAMETERS

`protocol`	String. The protocol type of the packet. This can be the following: `ip`, `ip6`, `arp`, `rarp`, `atalk`, `aarp`, `dec net`, `sca`, `lat`, `mopdl`, `moprc`, `iso`, `stp`, `ipx`, or `netbeui`.

EXAMPLE

The following filter string saves ARP packets:

```
ether proto arp
```

host

PURPOSE

The `host` element captures all incoming and outgoing packets for a specific computer.

SYNTAX

host *host*

PARAMETERS

`host`	IP Address or String. The computer to/from which the packet is sent. This can be the following: • An IP address • A host name

EXAMPLE

The following filter string saves all packets that either originated from IP address 192.168.10.1, or are destined for that same IP address:

host 192.168.10.1

not

PURPOSE

The `not` element is used to negate filter string elements.

SYNTAX

not element

! element

PARAMETERS

`element`	String. A filter string element.

EXAMPLE

The following filter string saves packets that are *not* destined for port 80:

```
not dst port 80
```

or

PURPOSE

The `or` element is used to alternate between string elements. The filtered packets must match at least one of the filter string elements.

SYNTAX

element or element [or element...]

element || element [|| element...]

PARAMETERS

`element`	String. A filter string element.

EXAMPLE

The following filter string saves packets that either originate from IP address 192.168.10.1 or IP address 192.168.10.10:

```
src 192.168.10.1 or src 192.168.10.10
```

port

PURPOSE

The `port` element captures all packets originating from or destined for a specific port.

SYNTAX

port *port*

Note: This element can be prepended by tcp or udp. For information, see ***tcp*** on page 417 and ***udp*** on page 418.

PARAMETERS

`port`	Integer. The port from/to which the packet is sent.

EXAMPLE

The following filter string saves all packets that either originated from port 80, or are destined for port 80:

```
port 80
```

src

PURPOSE

The `src` element captures all packets with a specific source.

SYNTAX

src *source*

PARAMETERS

`source`	IP Address or String. The computer from which the packet is sent. This can be the following: • An IP address • A host name

EXAMPLE

The following filter string saves packets that originated from IP address 192.168.10.1:

```
src 192.168.10.1
```

src port

PURPOSE

The `src port` element captures all packets originating from a specific port.

SYNTAX

src port *port*

Note: This element can be prepended by tcp or udp. For information, see ***tcp*** on page 417 and ***udp*** on page 418.

PARAMETERS

`port`	Integer. The port to which the packet is sent.

EXAMPLE

The following filter string saves packets that originated from port 80:

```
src port 80
```

tcp

PURPOSE

The `tcp` element captures all TCP packets. This element can be prepended to port-related elements.

Note: When not prepended to other elements, the `tcp` element is the equivalent of `ip proto tcp`.

SYNTAX

tcp

tcp *element*

PARAMETERS

`element`	String. A port-related filter string element that should be restricted to saving only TCP packets. This can be the following: • `dst port` - Capture all TCP packets destined for a specific port. • `port` - Captures all TCP packets originating from or destined for a specific port. • `src port` - Capture all TCP packets originating from a specific port.

EXAMPLE 1

The following filter string captures all TCP packets:

```
tcp
```

EXAMPLE 2

The following filter string captures all TCP packets destined for port 80:

```
tcp dst port 80
```

udp

PURPOSE

The `udp` element captures all UDP packets. This element can be prepended to port-related elements.

Note: When not prepended to other elements, the `udp` element is the equivalent of `ip proto udp`.

SYNTAX

`udp`

`udp` *element*

PARAMETERS

`element`	String. A port-related filter string element that should be restricted to saving only UDP packets. This can be the following: • `dst port` - Capture all UDP packets destined for a specific port. • `port` - Captures all UDP packets originating from or destined for a specific port. • `src port` - Capture all UDP packets originating from a specific port.

EXAMPLE 1

The following filter string captures all UDP packets:

```
udp
```

EXAMPLE 2

The following filter string captures all UDP packets destined for port 80:

```
udp dst port 80
```

Backing Up the Safe@Office Appliance Configuration

You can export the Safe@Office appliance configuration to a *.cfg file, and use this file to backup and restore Safe@Office appliance settings, as needed. The file includes all your settings.

The configuration file is saved as a textual CLI script. If desired, you can edit the file. For a full explanation of the CLI script format and the supported CLI commands, see the *Embedded NGX CLI Reference Guide*.

Exporting the Safe@Office Appliance Configuration

Exporting the Safe@Office appliance configuration creates a configuration file.

To export the Safe@Office appliance configuration

1. Click Setup in the main menu, and click the Tools tab.

   The Tools page appears.

2. Click Export.

   A standard File Download dialog box appears.

3. Click Save.

   The Save As dialog box appears.

4. Browse to a destination directory of your choice.
5. Type a name for the configuration file and click Save.

   The *.cfg configuration file is created and saved to the specified directory.

Importing the Safe@Office Appliance Configuration

500

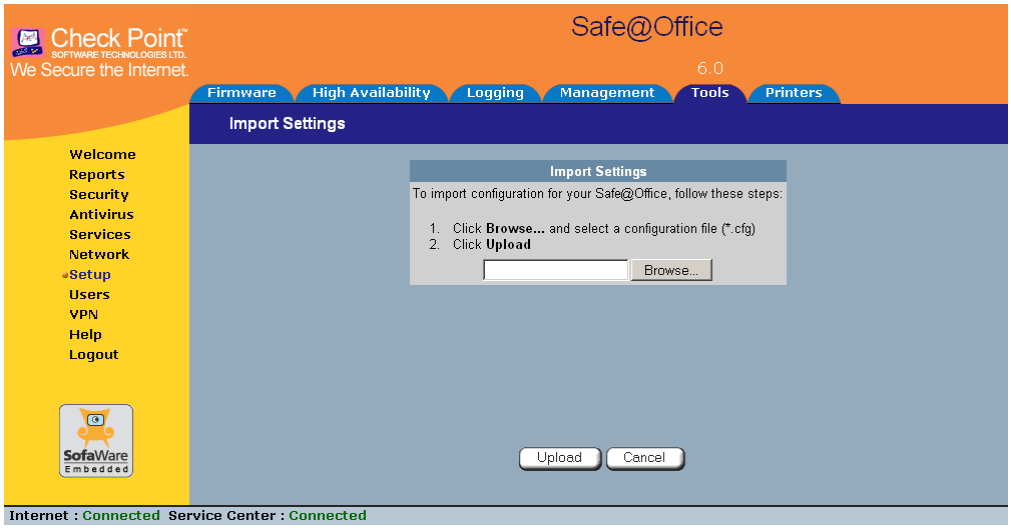
In order to restore your Safe@Office appliance's configuration from a configuration file, you must import the file.

To import the Safe@Office appliance configuration

1. Click Setup in the main menu, and click the Tools tab.

   The Tools page appears.
2. Click Import.

   The Import Settings page appears.



3. Do one of the following:

- In the Import Settings field, type the full path to the configuration file.

Or

- Click Browse, and browse to the configuration file.

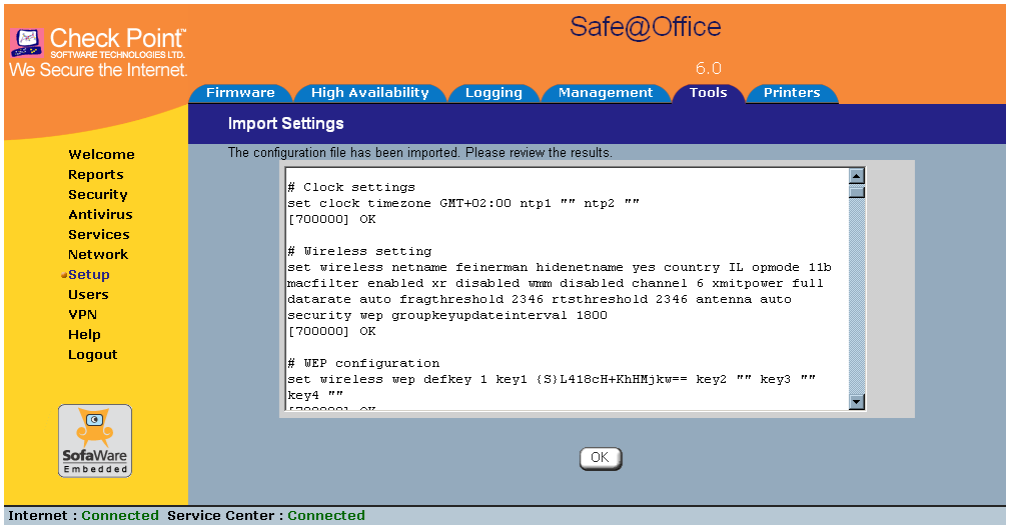
4. Click Upload.

   A confirmation message appears.

5. Click OK.

   The Safe@Office appliance settings are imported.

   The Import Settings page displays the configuration file's content and the result of implementing each configuration command.



Note: If the appliance's IP address changed as a result of the configuration import, your computer may be disconnected from the network; therefore you may not be able to see the results.

Resetting the Safe@Office Appliance to Defaults

500

You can reset the Safe@Office appliance to its default settings. When you reset your Safe@Office appliance, it reverts to the state it was originally in when you purchased it. You can choose to keep the current firmware or to revert to the firmware version that shipped with the Safe@Office appliance.

Warning: This operation erases all your settings and password information. You will have to set a new password and reconfigure your Safe@Office appliance for Internet connection. For information on performing these tasks, see Setting Up the Safe@Office Appliance.

You can reset the Safe@Office appliance to defaults via the Web management interface (software) or by manually pressing the Reset button (hardware) located at the back of the Safe@Office appliance.

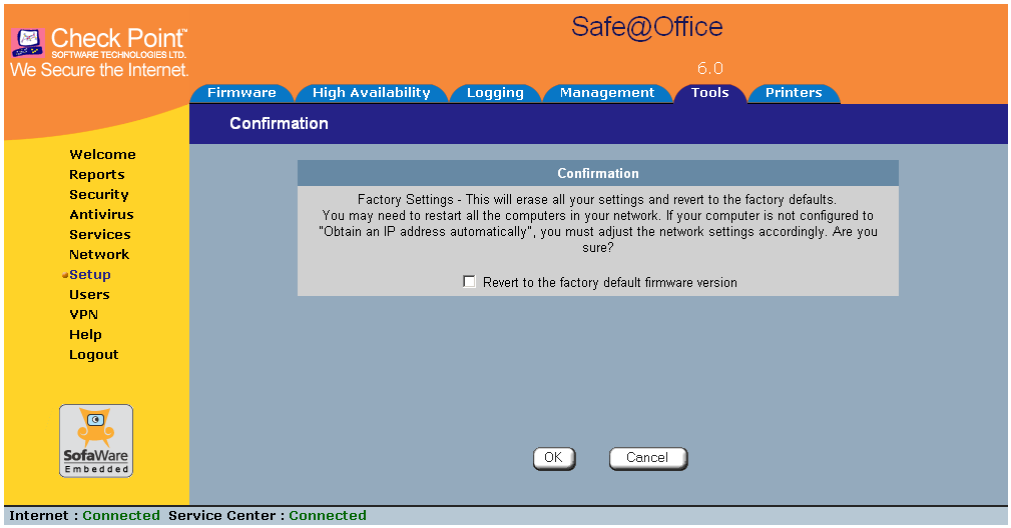
To reset the Safe@Office appliance to factory defaults via the Web interface

1. Click Setup in the main menu, and click the Tools tab.

   The Tools page appears.

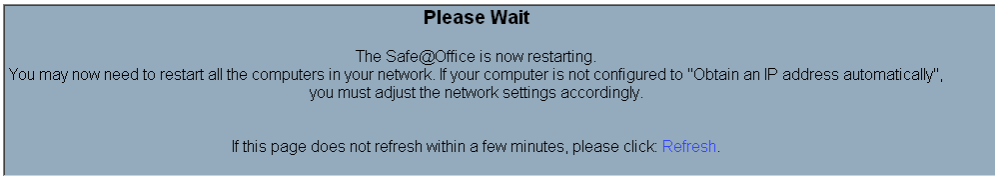
2. Click Factory Settings.

A confirmation message appears.



3. To revert to the firmware version that shipped with the appliance, select the check box.
4. Click OK.

- The Please Wait screen appears.



- The Safe@Office appliance returns to its factory defaults.
- The Safe@Office appliance is restarted (the PWR/SEC LED flashes quickly).

  This may take a few minutes.
- The Login page appears.

To reset the Safe@Office appliance to factory defaults using the Reset button

1. Make sure the Safe@Office appliance is powered on.
2. Using a pointed object, press the RESET button on the back of the Safe@Office appliance steadily for seven seconds and then release it.
3. Allow the Safe@Office appliance to boot-up until the system is ready (PWR/SEC LED flashes slowly or illuminates steadily in green light).

   For information on the appliance's front and rear panels, see the relevant *Getting to Know Your Appliance* section in ***Introduction*** on page 1.

Warning: If you choose to reset the Safe@Office appliance by disconnecting the power cable and then reconnecting it, be sure to leave the Safe@Office appliance disconnected for at least three seconds, or the Safe@Office appliance might not function properly until you reboot it as described below.

Running Diagnostics

You can view technical information about your Safe@Office appliance's hardware, firmware, license, network status, and Service Center.

This information is useful for troubleshooting. You can export it to an *.html file and send it to technical support.

To view diagnostic information

1. Click Setup in the main menu, and click the Tools tab.

   The Tools page appears.

2. Click Diagnostics.

   Technical information about your Safe@Office appliance appears in a new window.

3. To save the displayed information to an *.html file:

   a. Click Save.

      A standard File Download dialog box appears.

   b. Click Save.

      The Save As dialog box appears.

   c. Browse to a destination directory of your choice.

   d. Type a name for the configuration file and click Save.

      The *.html file is created and saved to the specified directory.

4. To refresh the contents of the window, click Refresh.

   The contents are refreshed.

5. To close the window, click Close.

Rebooting the Safe@Office Appliance

500

If your Safe@Office appliance is not functioning properly, rebooting it may solve the problem.

To reboot the Safe@Office appliance

1. Click Setup in the main menu, and click the Firmware tab.

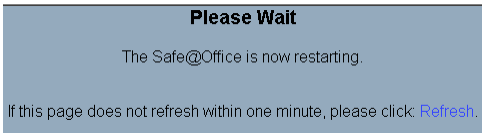
   The Firmware page appears.

2. Click Restart.

   A confirmation message appears.

3. Click OK.

   - The Please Wait screen appears.

   - The Safe@Office appliance is restarted (the PWR/SEC LED flashes quickly).

     This may take a few minutes.

   - The Login page appears.

Chapter 15

Using Network Printers

This chapter describes how to set up and use network printers.

This chapter includes the following topics:

Overview 427
Setting Up Network Printers 428
Configuring Computers to Use Network Printers 429
Viewing Network Printers 439
Changing Network Printer Ports 439
Resetting Network Printers 440

Overview

The Safe@Office 500W includes a built-in print server, enabling you to connect USB-based printers to the appliance and share them across the network.

Note: When using computers with a Windows 2000/XP operating system, the Safe@Office appliance supports connecting up to four USB-based printers to the appliance. When using computers with a MAC OS-X operating system, the Safe@Office appliance supports connecting one printer.

The appliance automatically detects printers as they are plugged in, and they immediately become available for printing. Usually, no special configuration is required on the Safe@Office appliance.

Note: The Safe@Office print server supports printing via "all-in-one" printers. Copying and scanning functions are not supported.

Setting Up Network Printers

500W

To set up a network printer

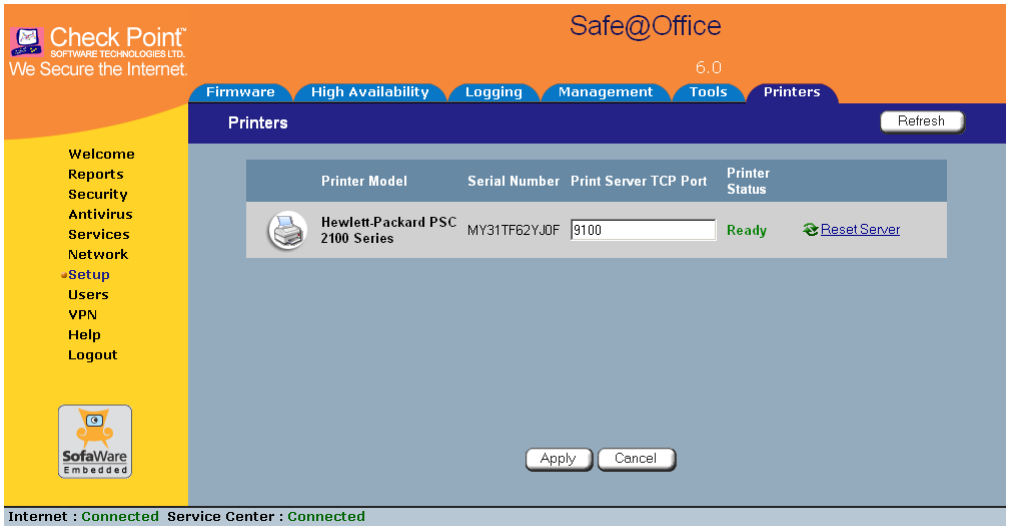
1. Connect the network printer to the Safe@Office appliance.

   See ***Network Installation*** on page 37.

2. Turn the printer on.

3. In the Safe@Office Portal, click Setup in the main menu, and click the Printers tab.

   The Printers page appears. If the Safe@Office appliance detected the printer, the printer is listed on the page.



4. If the printer is not listed, check that you connected the printer correctly, then click Refresh to refresh the page.

5. Write down the port number allocated to the printer.

The port number appears in the Printer Server TCP Port field. You will need this number later, when configuring computers to use the network printer.

6. To change the port number, do the following:

   a. Type the desired port number in the Printer Server TCP Port field.

Note: Printer port numbers may not overlap, and must be high ports.

   b. Click Apply.

   You may want to change the port number if, for example, the printer you are setting up is intended to replace another printer. In this case, you should change the replacement printer's port number to the old printer's port number, and you can skip the next step.

7. Configure each computer from which you want to enable printing to the network printer.

   See ***Configuring Computers to Use Network Printers*** on page 429.

Configuring Computers to Use Network Printers

500W

Perform the relevant procedure on each computer from which you want to enable printing via the Safe@Office print server to a network printer.

Windows 2000/XP

This procedure is relevant for computers with a Windows 2000/XP operating system.

To configure a computer to use a network printer

1. If the computer for which you want to enable printing is located on the WAN, create an Allow rule for connections from the computer to This Gateway.

   See ***Adding and Editing Rules*** on page 215.

2. Click **Start** > **Settings** > **Control Panel**.

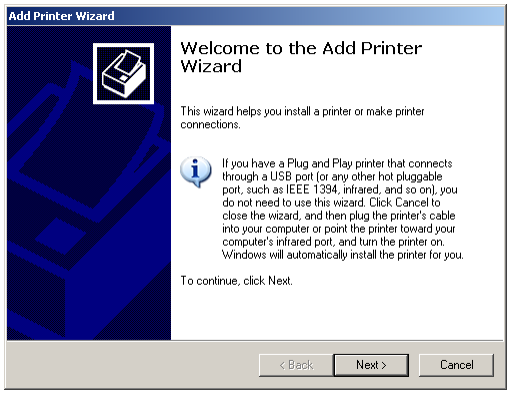
   The **Control Panel** window opens.

3. Click **Printers and Faxes**.

   The **Printers and Faxes** window opens.

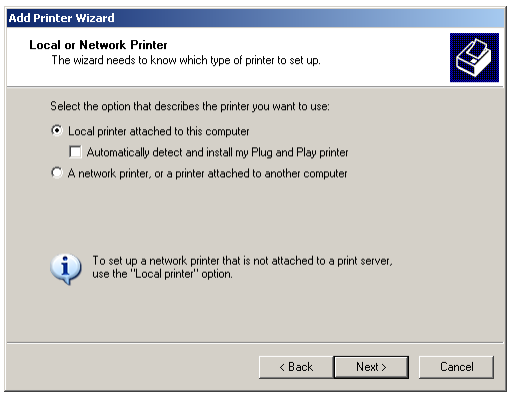
4. Right-click in the window, and click **Add Printer** in the popup menu.

   The **Add Printer Wizard** opens with the **Welcome** dialog box displayed.



5. Click **Next**.

   The **Local or Network Printer** dialog box appears.

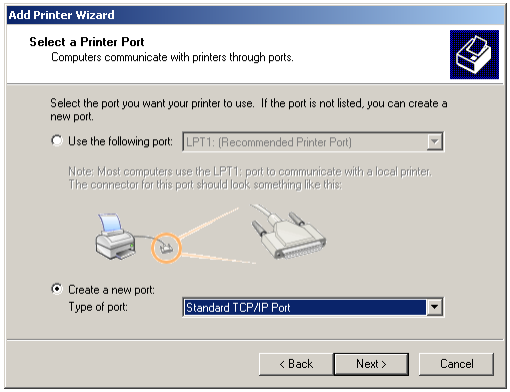


6. Click **Local printer attached to this computer**.

Note: Do not select the Automatically detect and install my Plug and Play printer check box.

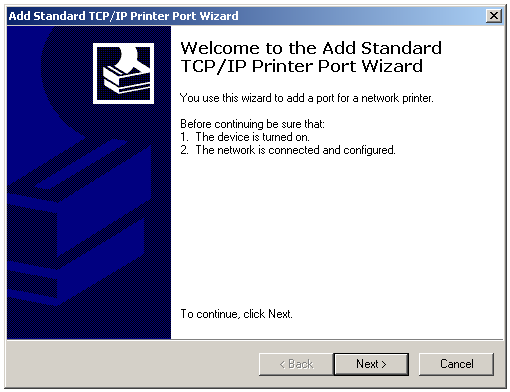
7. Click **Next**.

   The **Select a Printer Port** dialog box appears.



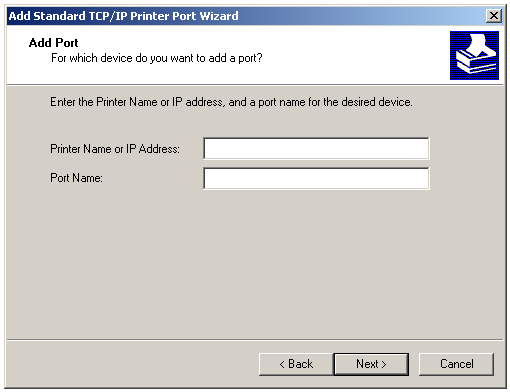
8. Click **Create a new port**.
9. In the **Type of port** drop-down list, select **Standard TCP/IP Port**.
10. Click **Next**.

    The **Add Standard TCP/IP Port Wizard** opens with the **Welcome** dialog box displayed.



11. Click **Next**.

The Add Port dialog box appears.



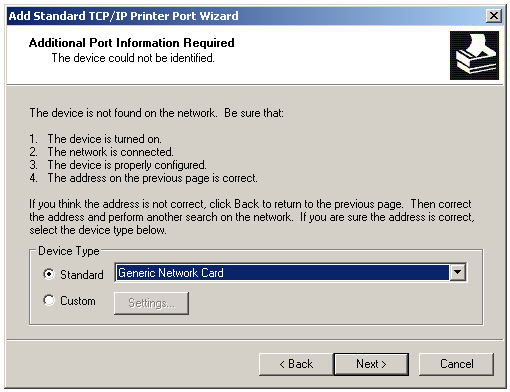
12. In the Printer Name or IP Address field, type the Safe@Office appliance's LAN IP address, or "my.firewall".

    You can find the LAN IP address in the Safe@Office Portal, under Network > My Network.

    The Port Name field is filled in automatically.

13. Click Next.

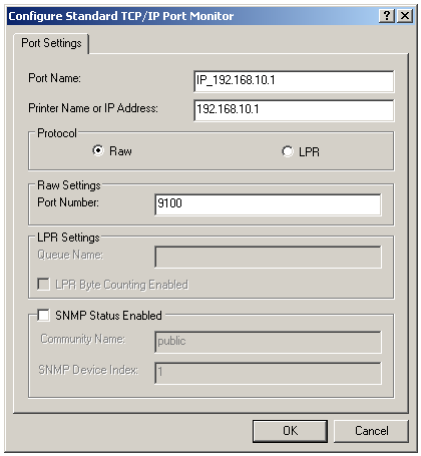
    The Add Standard TCP/IP Printer Port Wizard opens, with the Additional Port Information Required dialog box displayed.



14. Click Custom.

15. Click Settings.

The Configure Standard TCP/IP Port Monitor dialog box opens.

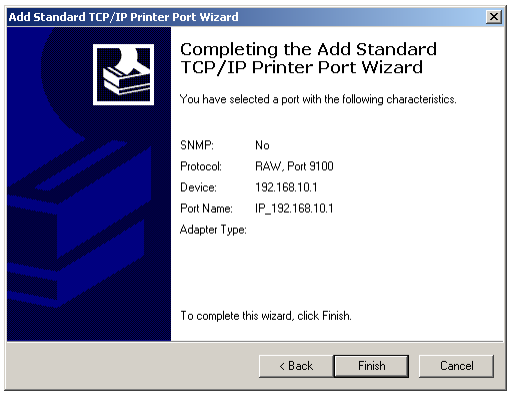


16. In the Port Number field, type the printer's port number, as shown in the Printers page.
17. In the Protocol area, make sure that Raw is selected.
18. Click OK.

    The Add Standard TCP/IP Printer Port Wizard reappears.

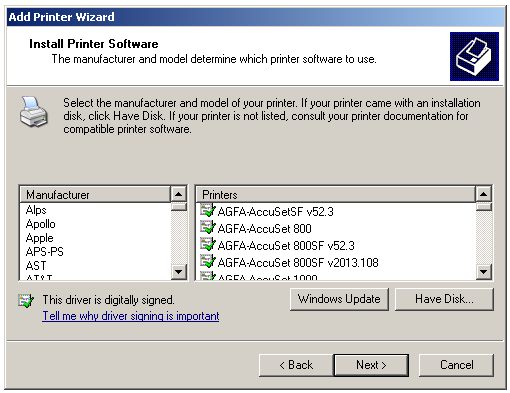
19. Click Next.

    The Completing the Add Standard TCP/IP Printer Port Wizard dialog box appears.



20. Click Finish.

The Add Printer Wizard reappears, with the Install Printer Software dialog box displayed.



21. Do one of the following:

- Use the lists to select the printer's manufacturer and model.
- If your printer does not appear in the lists, insert the CD that came with your printer in the computer's CD-ROM drive, and click Have Disk.

22. Click Next.

23. Complete the remaining dialog boxes in the wizard as desired, and click Finish.

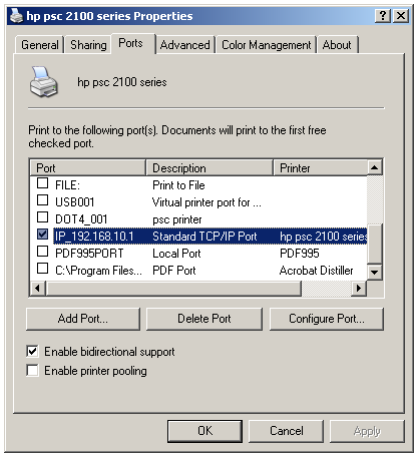
    The printer appears in the Printers and Faxes window.

24. Right-click the printer and click Properties in the popup menu.

    The printer's Properties dialog box opens.

25. In the Ports tab, in the list box, select the port you added.

The port's name is IP_<LAN IP address>.



26. Click OK.

MAC OS-X

This procedure is relevant for computers with the latest version of the MAC OS-X operating system.

Note: This procedure may not apply to earlier MAC OS-X versions.

To configure a computer to use a network printer

1. If the computer for which you want to enable printing is located on the WAN, create an Allow rule for connections from the computer to This Gateway.

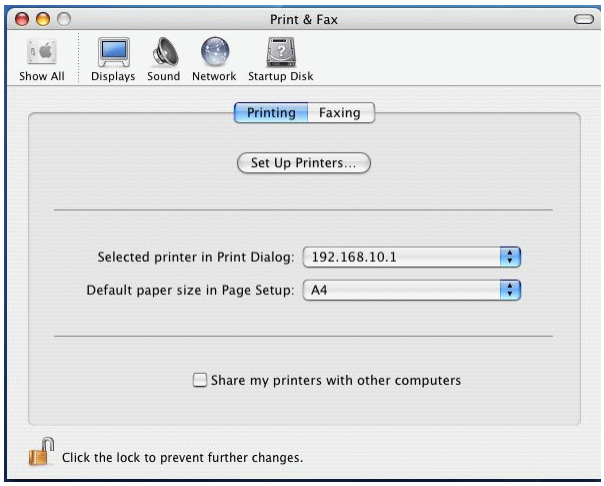
   See ***Adding and Editing Rules*** on page 215.

2. Choose Apple -> System Preferences.

The System Preferences window appears.

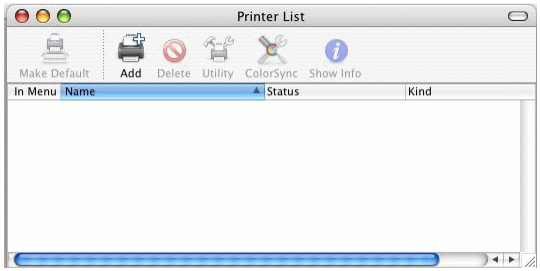
3. Click Show All to display all categories.
4. In the Hardware area, click Print & Fax.

   The Print & Fax window appears.



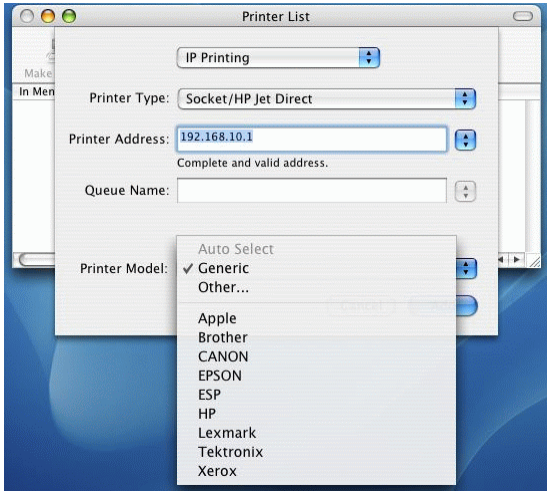
5. In the Printing tab, click Set Up Printers.

The Printer List window appears.



6. Click Add.

   New fields appear.



7. In the first drop-down list, select IP Printing.
8. In the Printer Type drop-down list, select Socket/HP Jet Direct.
9. In the Printer Address field, type the Safe@Office appliance's LAN IP address, or "my.firewall".

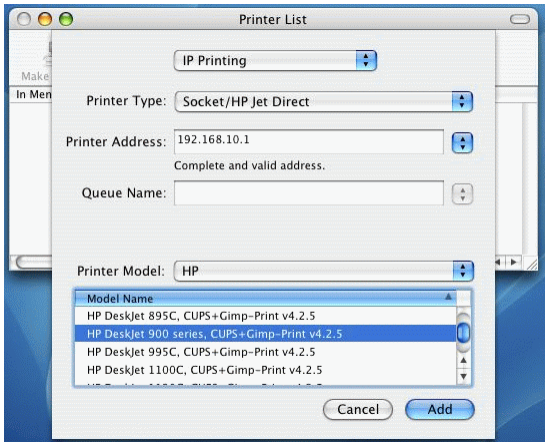
   You can find the LAN IP address in the Safe@Office Portal, under Network > My Network.

10. In the Queue Name field, type the name of the required printer queue.

    For example, the printer queue name for HP printers is RAW.

11. In the Printer Model list, select the desired printer type.

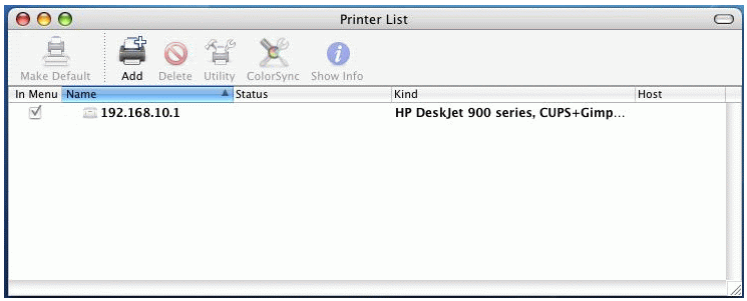
    A list of models appears.



12. In the Model Name list, select the desired model.

13. Click Add.

    The new printer appears in the Printer List window.



14. In the Printer List window, select the newly added printer, and click Make Default.

Viewing Network Printers

500W

To view network printers

1. Click Setup in the main menu, and click the Printers tab.

   The Printers page appears, displaying a list of connected printers.

   For each printer, the model, serial number, port, and status is displayed.

   A printer can have the following statuses:

   - Initialize. The printer is initializing.
   - Ready. The printer is ready.
   - Not Ready. The printer is not ready. For example, it may be out of paper.
   - Printing. The printer is processing a print job.
   - Restarting. The printer server is restarting.
   - Fail. An error occurred. See the Event Log for details (***Viewing the Event Log*** on page 189).
2. To refresh the display, click Refresh.

Changing Network Printer Ports

500W

When you set up a new network printer, the Safe@Office appliance automatically assigns a port number to the printer. If you want to use a different port number, you can easily change it, as described in ***Setting up Network Printers*** on page 428.

However, you may sometimes need to change the port number after completing printer setup. For example, you may want to replace a malfunctioning network printer, with another existing network printer, without reconfiguring the client

computers. To do this, you must change the replacement printer's port number to the malfunctioning printer's port number, as described below.

Note: Each printer port number must be different, and must be a high port.

To change a printer's port

1. Click Setup in the main menu, and click the Printers tab.

   The Printers page appears.
2. In the printer's Printer Server TCP Port field, type the desired port number.
3. Click Apply.

Resetting Network Printers

500W

You can cause a network printer to restart the current print job, by resetting the network printer. You may want to do this if the print job has stalled.

To reset a network printer

1. Click Setup in the main menu, and click the Printers tab.

   The Printers page appears.
2. Next to the desired printer, click Reset.

   The network printer's current print job is restarted.

Chapter 16

Troubleshooting

This chapter provides solutions to common problems you may encounter while using the Safe@Office appliance.

Note: For information on troubleshooting wireless connectivity, see ***Troubleshooting Wireless Connectivity*** on page 185.

This chapter includes the following topics:

Connectivity 442
Service Center and Upgrades..... 446
Other Problems..... 447

Connectivity

I cannot access the Internet. What should I do?

- Check if the PWR/SEC LED is green. If not, check the power connection to the Safe@Office appliance.
- Check if the WAN LINK/ACT LED is green. If not, check the network cable to the modem and make sure the modem is turned on.
- Check if the LAN LINK/ACT LED for the port used by your computer is green. If not, check if the network cable linking your computer to the Safe@Office appliance is connected properly. Try replacing the cable or connecting it to a different LAN port.
- Using your Web browser, go to http://my.firewall and see whether "Connected" appears on the Status Bar. Make sure that your Safe@Office appliance network settings are configured as per your ISP directions.
- Check your TCP/IP configuration according to ***Installing and Setting up the Safe@Office Appliance*** on page 17.
- If Web Filtering or Email Filtering are on, try turning them off.
- Check if you have defined firewall rules which block your Internet connectivity.
- Check with your ISP for possible service outage.
- Check whether you are exceeding the maximum number of computers allowed by your license, by viewing the Active Computers page.

I cannot access my DSL broadband connection. What should I do?

DSL equipment comes in two flavors: bridges (commonly known as DSL modems) and routers. Some DSL equipment can be configured to work both ways.

- If you connect to your ISP using a PPPoE or PPTP dialer defined in your operating system, your equipment is most likely configured as a DSL bridge. Configure a PPPoE or PPTP type DSL connection.
- If you were not instructed to configure a dialer in your operating system, your equipment is most likely configured as a DSL router. Configure a LAN connection, even if you are using a DSL connection.

For instructions, see ***Configuring the Internet Connection*** on page 55.

I cannot access my Cable broadband connection. What should I do?

- Some cable ISPs require you to register the MAC address of the device behind the cable modem. You may need to clone your Ethernet adapter MAC address onto the Safe@Office appliance. For instructions, see ***Configuring the Internet Connection*** on page 55.
- Some cable ISPs require using a hostname for the connection. Try reconfiguring your Internet connection and specifying a hostname. For further information, see ***Configuring the Internet Connection*** on page 55.

I cannot access http://my.firewall or http://my.vpn. What should I do?

- Verify that the Safe@Office appliance is operating (PWR/SEC LED is active)
- Check if the LAN LINK/ACT LED for the port used by your computer is on. If not, check if the network cable linking your computer to the Safe@Office appliance is connected properly.

Note: You may need to use a crossed cable when connecting the Safe@Office appliance to another hub/switch.

- Try surfing to 192.168.10.1 instead of to my.firewall.

Note: 192.168.10 is the default value, and it may vary if you changed it in the My Network page.

- Check your TCP/IP configuration according to ***Installing and Setting up the Safe@Office Appliance*** on page 17.
- Restart your Safe@Office appliance and your broadband modem by disconnecting the power and reconnecting after 5 seconds.
- If your Web browser is configured to use an HTTP proxy to access the Internet, add "my.firewall" or "my.vpn" to your proxy exceptions list.

My network seems extremely slow. What should I do?

- The Ethernet cables may be faulty. For proper operation, the Safe@Office appliance requires STP CAT5 (Shielded Twisted Pair Category 5) Ethernet cables. Make sure that this specification is printed on your cables.
- Your Ethernet card may be faulty or incorrectly configured. Try replacing your Ethernet card.
- There may be an IP address conflict in your network. Check that the TCP/IP settings of all your computers are configured to obtain an IP address automatically.

I changed the network settings to incorrect values and am unable to correct my error. What should I do?

Reset the network to its default settings using the button on the back of the Safe@Office appliance unit. See ***Resetting the Safe@Office Appliance to Defaults*** on page 422.

I am using the Safe@Office appliance behind another NAT device, and I am having problems with some applications. What should I do?

By default, the Safe@Office appliance performs Network Address Translation (NAT). It is possible to use the Safe@Office appliance behind another device that performs NAT, such as a DSL router or Wireless router, but the device will block all incoming connections from reaching your Safe@Office appliance.

To fix this problem, do ONE of the following. (The solutions are listed in order of preference.)

- Consider whether you really need the router. The Safe@Office appliance can be used as a replacement for your router, unless you need it for some additional functionality that it provides, such as Wireless access.
- If possible, disable NAT in the router. Refer to the router's documentation for instructions on how to do this.
- If the router has a "DMZ Computer" or "Exposed Host" option, set it to the Safe@Office appliance's external IP address.
- Open the following ports in the NAT device:
  - UDP 9281/9282
  - UDP 500
  - TCP 256
  - TCP 264
  - ESP IP protocol 50
  - TCP 981

I cannot receive audio or video calls through the Safe@Office appliance. What should I do?

To enable audio/video, you must configure an IP Telephony (H.323) virtual server. For instructions, see ***Configuring Servers*** on page 209.

I run a public Web server at home but it cannot be accessed from the Internet. What should I do?

Configure a virtual Web Server. For instructions, see ***Configuring Servers*** on page 209.

I cannot connect to the LAN network from the DMZ or WLAN network. What should I do?

By default, connections from the DMZ or WLAN network to the LAN network are blocked. To allow traffic from the DMZ or WLAN to the LAN, configure appropriate firewall rules. For instructions, see ***Using Rules*** on page 211.

Service Center and Upgrades

I purchased an advanced Safe@Office model, but I only have the functionality of a simpler Safe@Office model. What should I do?

Your have not installed your product key. For further information, see ***Upgrading Your Software Product*** on page 383.

I have exceeded my node limit. What does this mean? What should I do?

Your Product Key specifies a maximum number of nodes that you may connect to the Safe@Office appliance.

The Safe@Office appliance tracks the cumulative number of nodes on the internal network that have communicated through the firewall. When the Safe@Office appliance encounters an IP address that exceeds the licensed node limit, the Active Computers page displays a warning message and marks nodes over the node limit in red. These nodes will not be able to access the Internet through the Safe@Office appliance, but will be protected. The Event Log page also warns you that you have exceeded the node limit.

To upgrade your Safe@Office appliance to support more nodes, purchase a new Product Key. Contact your reseller for upgrade information.

While trying to connect to a Service Center, I received the message "The Service Center did not respond". What should I do?

- If you are using a Service Center other than the Check Point Service Center, check that the Service Center IP address is typed correctly.
- The Safe@Office appliance connects to the Service Center using UDP ports 9281/9282. If the Safe@Office appliance is installed behind another firewall, make sure that these ports are open.

Other Problems

I have forgotten my password. What should I do?

Reset your Safe@Office appliance to factory defaults using the Reset button as detailed in ***Resetting the Safe@Office Appliance to Defaults*** on page 422.

Why are the date and time displayed incorrectly?

You can adjust the time on the Setup page's Tools tab. For information, see ***Setting the Time on the Appliance*** on page 401.

I cannot use a certain network application. What should I do?

Look at the Event Log page. If it lists blocked attacks, do the following:

- Set the Safe@Office appliance's firewall level to Low and try again.
- If the application still does not work, set the computer on which you want to use the application to be the exposed host.

  For instructions, see ***Defining an Exposed Host*** on page 263.

When you have finished using the application, make sure to clear the exposed host setting, otherwise your security might be compromised.

Chapter 17

Specifications

This chapter includes the following topics:

Technical Specifications 449
CE Declaration of Conformity 458
Federal Communications Commission Radio Frequency Interference Statement 460

Technical Specifications

Table 86: Model SBX-166LHGE-2 Appliance Attributes

Attribute	Safe@Office 500 SBX-166LHGE-2
General	
Dimensions (width x height x depth)	20.32 x 3.05 x 12.19 cm (8 x 1.2 x 4.8 inches)
Weight	0.7 kg (1.56 lbs)
Power supply nominal input voltage, frequency	US Model: 90~132 VAC, 50~60Hz Japan Model: 100VAC, 50~60Hz EU Model: 200~265 VAC, 50~60Hz
Power supply nominal output voltage	All Models: 9VAC, 1.5A

Attribute	Safe@Office 500 SBX-166LHGE-2
Max. Power Consumption	7.5W
Retail box dimensions (width x height x depth)	31 x 10 x 16 cm (12.4 x 4 x 6.4 inches)
Retail box weight	1.3 kg (2.9 lbs)
Environmental Conditions	
Temperature: Storage/Transport	- 20°C to +70°C
Temperature: Operation	+ 5°C to +45°C
Humidity: Storage/Operation	5%~90% at 25°C/ None condensed
Applicable Standards	
Shock & Vibration	ETSI 300 019-2-3 CLASS 3.1 & Bellcore GR 63 (NEBS)
Safety	EN60950/ IEC60950/ UL60950
Quality	ISO9001
Mean Time Between Failures (MTBF)	68,000 Hours at 30 ºC

Table 87: Model SBX-166LHGE-4 Appliance Attributes

Attribute	Safe@Office 500 SBX-166LHGE-4 / Safe@Office 500W SBXW-166LHGE-4
General	
Dimensions (width x height x depth)	20 x 3.1 x 15.5 cm (7.9 x 1.2 x 6.1 inches)
Weight	0.69 kg (1.55 lbs)
Power supply nominal input voltage, frequency	All Models: 100~240VAC, 50~60Hz
Power supply nominal output voltage	All Models: 5VDC, 3A
Max. Power Consumption	8W (1.6A w/o external USB devices) 13W (2.6A w USB devices)
Retail box dimensions (width x height x depth)	29 x 25 x 7.6 cm (11.4 x 9.8 x 3 inches)
Retail box weight	1.35 kg (3 lbs)
Environmental Conditions	
Temperature: Storage/Transport	- 5°C to +70°C
Temperature: Operation	- 5°C ~ 50°C

Attribute	Safe@Office 500 SBX-166LHGE-4 / Safe@Office 500W SBXW-166LHGE-4
Humidity: Storage/Operation	5%~90% at 25°C/ None condensed
Applicable Standards	
Shock & Vibration	CNS1219 C6343
Safety	EN60950/ IEC60950/ cTUVus 60950
Quality	ISO9001:2000 TL9000-HW R3.0 ISO14001 Ohsas18001: 1999
Mean Time Between Failures (MTBF)	68,000 Hours at 30 ºC

Table 88: Model SBX-166LHGE-5 Appliance Attributes

	Standard / Wired	DSL / Wired
General		

Model ID	VPN-1 Edge X Safe@Office 500	VPN-1 Edge X ADSL Safe@Office 500 ADSL
Board's H/W Model	SBX-166-LHGE-5	SBXD-166-LHGE-5
Dimensions (width x height x depth)	200 x 33 x 122mm	200 x 33 x 122mm
Weight		
Power Adapter nominal input voltage, frequency	In: 100/110/120/21/22/230VAC @ 0.5A Out: 9VAC @ 1.5A	In: 100/110/120/21/22/230VAC @ 0.5A Out: 9VAC @ 1.5A
Power supply nominal output voltage	In: 90~264VAC @ Out: 12VDC @ 1.5 A	In: 90~264VAC @ Out: 12VDC @ 1.5 A
Max. Power Consumption	4.5W	8.5W
Retail box dimensions (width x height x depth)		
Retail box weight		
Environmental Conditions		
Temperature: Storage/Transport	-5ºC ~ 80 ºC	-5ºC ~ 80 ºC
Temperature: Operation	0ºC ~ 40 ºC	0ºC ~ 40 ºC
Humidity: Storage/Operation	10~95% / 10~90% (none-condensed)	10~95% / 10~90% (none-condensed)
Applicable Standards		
Shock & Vibration	MIL-STD- 202F,IEC 68-2-32	MIL-STD-202F,IEC 68-2-32
Safety	cULus, CB, LVD	cULus, CB, LVD
Quality	ISO 9001,ISO 14001,TL9000	ISO9001,ISO 14001,TL9000
EMC	CE . FCC 15B.VCCI	CE . FCC 15B.VCCI
ADSL	N/A	Part 68.CS03.JATE

	Standard / Wireless	DSL / Wireless
General		
Model ID	VPN-1 Edge W Safe@Office 500W	VPN-1 Edge W ADSL Safe@Office 500W ADSL
Board's H/W Model	SBXW-166-LHGE-5	SBXWD-166-LHGE-5
Dimensions (width x height x depth)	200 x 33 x 130mm (inc. Antenna's Conn.)	200 x 33 x 130mm (inc. Antenna's Conn.)
Weight		
Power Adapter nominal input voltage, frequency	In: 100/110/120/21/22/230VAC @ 0.5A Out: 9VAC @ 1.5A	In: 100/110/120/21/22/230VAC @ 0.5A Out: 9VAC @ 1.5A
Power supply nominal output voltage	In: 90~264VAC @ Out: 12VDC @ 1.5 A	In: 90~264VAC @ Out: 12VDC @ 1.5 A
Max. Power Consumption	6.5W	10.5W
Environmental Conditions		
Temperature: Storage/Transport	-5ºC ~ 80 ºC	-5ºC ~ 80 ºC
Temperature: Operation	0ºC ~ 40 ºC	0ºC ~ 40 ºC
Humidity: Storage/Operation	10~95% / 10~90% (none-condensed)	10~95% / 10~90% (none-condensed)
Applicable Standards		
Shock & Vibration	MIL-STD-202F,IEC 68-2-32	MIL-STD-202F,IEC 68-2-32
Quality	ISO9001,ISO 14001,TL9000	ISO9001,ISO 14001,TL9000
RF	R&TTE .FCC15C,TELCO	R&TTE .FCC15C,TELCO

Model SBX-166LHGE-5 EMC:

North America USA	FCC Part 15	Class B United States Code of Federal Regulations, Radio Frequency Devices, Unintentional Radiators
Canada	ICES-003, Class B	Industry Canada Interference-Causing Equipment Standard, Digital Apparatus
Europe	EN 55022:1998, Class B	Information Technology Equipment – Radio Disturbance Characteristics – Limits and Methods of Measurement
	EN 55024:1998	Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement
Worldwide	CISPR 22:1997, Class B	Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment
AUS / NZ	AS/NZS 3548:1997, Class B	Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment

Model SBX-166LHGE-5 Safety/Low Voltage:

Worldwide	IEC 60950, 3rd ed. + Amendment 11	Safety of Information Technology Equipment
Europe	EN 60950, 3rd ed. + Amendment 11	Safety of Information Technology Equipment
USA	UL 60950, 3rd ed.	Safety of Information Technology Equipment
Canada	CAN/CSA-C22.2 No. 60950-00, 3rd ed.	Safety of Information Technology Equipment
AUS/NZ	AS/NZS 3260:1993 + Amendments 1..4	Safety of Information Technology Equipment
AUS/NZ	ACA TS 001-1997	Safety of Information Technology

		Equipment

Model SBX-166LHGE-5D Telecom:

USA	FCC Part 68	United States Code of Federal Regulations, Connection of Terminal Equipment to the Telephone Network
	TIA/EIA/IS 968:2001	Telecommunications Telephone Terminal Equipment, Technical Requirements for Connection of Terminal Equipment to the Telephone Network
	TIA/EIA/IS 883:2001	Telecommunications Telephone Terminal Equipment, Supplemental Technical Requirements for Connection of Stutter Dial Tone Detection Devices and ADSL Modems to the Telephone Network
Canada	IC CS-03, March 2001, Parts I and VIII	Harmonized Requirements For Terminal Equipment, Terminal Systems, and Registered Protection Circuitry (Part I) and Requirements and Test Methods for Digital Subscriber Line (xDSL) Terminal Equipment (Part VIII)
Europe	ITU-T G.992.1,.2,.3,.4,.5 and G. 994.1 ANSI T1.413 issue 2 ETSI TS 101 388 ETR 152, ETR 080, ETR 328 ITU-T G.703, ITU-T G.704	Asymmetric Digital Subscriber Line (ADSL/ADSL2) Transceivers
AUS	ACA S043	

Table 89: Safe@Office Wireless Attributes

Attribute	Safe@Office 500W series
Operation Frequency	2.412-2.484 MHz
Transmission Power	79.4 mW
Modulation	OFDM, DSSS, 64QAM, 16QAM, QPSK, BPSK, CCK, DQPSK, DBPSK
WPA Authentication Modes	EAP-TLS, EAP-TTLS, PEAP (EAP-GTC), PEAP (EAP-MSCHAP V2)

CE Declaration of Conformity

SofaWare Technologies Ltd., 3 Hilazon St., Ramat-Gan Israel, hereby declares that this equipment is in conformity with the essential requirements specified in Article 3.1 (a) and 3.1 (b) of:

- Directive 89/336/EEC (EMC Directive)
- Directive 73/23/EEC (Low Voltage Directive – LVD)
- Directive 99/05/EEC (Radio Equipment and Telecommunications Terminal Equipment Directive)

In accordance with the following standards:

Table 90: Safe@Office Appliance Standards

Attribute	Safe@Office 500 SBX-166LHGE-2	Safe@Office 500 SBX-166LHGE-4 / Safe@Office 500W SBXW-166LHGE-4
EMC	EN 55022:1998	EN 50081-1:1992
	EN 61000-3-2: 1995	EN 50082-1:1997
	EN 61000-3-3: 1995	EN 61000-6-1:2001
	EN 61000-4-2:1995	EN 61000-6-3:2001
	EN 61000-4-3:1995	EN 55022:1998
	EN 61000-4-4:1995	EN 55024:1998
	EN 61000-4-5:1995	EN 61000-3-2: 1995
	EN 61000-4-6:1996	EN 61000-3-3: 1995

Attribute	Safe@Office 500 SBX-166LHGE-2	Safe@Office 500 SBX-166LHGE-4 / Safe@Office 500W SBXW-166LHGE-4
	EN 61000-4-8:1993	EN 61000-4-2:1995
	EN 61000-4-11:1994	EN 61000-4-3:1996/A2:2001
	ENV50204:1995	EN 61000-4-4:1995
		EN 61000-4-5:1995
		EN 61000-4-6:1996
		EN 61000-4-7:1993
		EN 61000-4-8:1993
		EN 61000-4-9:1993
		EN 61000-4-10:1993
		EN 61000-4-11:1994
		EN 61000-4-12:1995
Safety	EN 60950: 2000	EN 60950: 2000
	IEC 60950:1999	IEC 60950:1999

The "CE" mark is affixed to this product to demonstrate conformance to the R&TTE Directive 99/05/EEC (Radio Equipment and Telecommunications Terminal Equipment Directive) and FCC Part 15 Class B.

The product has been tested in a typical configuration. For a copy of the Original Signed Declaration (in full conformance with EN45014), please contact SofaWare at the above address.

Federal Communications Commission Radio Frequency Interference Statement

This equipment complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Shielded cables must be used with this equipment to maintain compliance with FCC regulations.

Any changes or modifications to this product not explicitly approved by the manufacturer could void the user's authority to operate the equipment and any assurances of Safety or Performance, and could result in violation of Part 15 of the FCC Rules.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003.

FCC Radiation Exposure Statement for Wireless Models

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The antenna(s) used for this equipment must be installed to provide a separation distance of at least eight inches (20 cm) from all persons. This equipment must not be operated in conjunction with any other antenna.

Glossary of Terms

A

ADSL Modem

A device connecting a computer to the Internet via an existing phone line. ADSL (Asymmetric Digital Subscriber Line) modems offer a high-speed 'always-on' connection.

C

CA

The Certificate Authority (CA) issues certificates to entities such as gateways, users, or computers. The entity later uses the certificate to identify itself and provide verifiable information. For instance, the certificate includes the Distinguished Name (DN) (identifying information) of the entity, as well as the public key (information about itself), and possibly the IP address.

After two entities exchange and validate each other's certificates, they can begin encrypting information between themselves using the public keys in the certificates.

Cable Modem

A device connecting a computer to the Internet via the cable television network. Cable modems offer a high-speed 'always-on' connection.

Certificate Authority

The Certificate Authority (CA) issues certificates to entities such as gateways, users, or computers. The entity later uses the certificate to identify itself and provide verifiable information. For instance, the certificate includes the Distinguished Name (DN) (identifying information) of the entity, as well as the public key (information about itself), and possibly the IP address.

After two entities exchange and validate each other's certificates, they can begin encrypting information between themselves using the public keys in the certificates.

Cracking

An activity in which someone breaks into someone else's computer system, bypasses passwords or licenses in computer programs; or in other ways intentionally breaches computer security. The end result is that whatever resides on the computer can be viewed and sensitive data can be stolen without

anyone knowing about it. Sometimes, tiny programs are 'planted' on the computer that are designed to watch out for, seize and then transmit to another computer, specific types of data.

D

DHCP

Any machine requires a unique IP address to connect to the Internet using Internet Protocol. Dynamic Host Configuration Protocol (DHCP) is a communications protocol that assigns Internet Protocol (IP) addresses to computers on the network.

DHCP uses the concept of a "lease" or amount of time that a given IP address will be valid for a computer.

DMZ

A DMZ (demilitarized zone) is an internal network defined in addition to the LAN network and protected by the Safe@Office appliance.

DNS

The Domain Name System (DNS) refers to the Internet domain names, or easy-to-remember "handles", that are translated into IP addresses.

An example of a Domain Name is 'www.sofaware.com'.

Domain Name System

Domain Name System. The Domain Name System (DNS) refers to the Internet domain names, or easy-to-remember "handles", that are translated into IP addresses.

An example of a Domain Name is 'www.sofaware.com'.

E

Exposed Host

An exposed host allows one computer to be exposed to the Internet. An example of using an exposed host would be exposing a public server, while preventing outside users from getting direct access form this server back to the private network.

F

Firmware

Software embedded in a device.

G

Gateway

A network point that acts as an entrance to another network.

H

Hacking

An activity in which someone breaks into someone else's computer system, bypasses passwords or licenses in computer programs; or in

other ways intentionally breaches computer security. The end result is that whatever resides on the computer can be viewed and sensitive data can be stolen without anyone knowing about it. Sometimes, tiny programs are 'planted' on the computer that are designed to watch out for, seize and then transmit to another computer, specific types of data.

HTTPS

Hypertext Transfer Protocol over Secure Socket Layer, or HTTP over SSL.

A protocol for accessing a secure Web server. It uses SSL as a sublayer under the regular HTTP application. This directs messages to a secure port number rather than the default Web port number, and uses a public key to encrypt data

HTTPS is used to transfer confidential user information.

Hub

A device with multiple ports, connecting several PCs or network devices on a network.

I

IP Address

An IP address is a 32-bit number that identifies each computer sending or receiving data packets across the Internet. When you request an HTML page or send e-mail, the Internet Protocol part of TCP/IP includes your IP address in the message and sends it to the IP address that is obtained by looking up the domain name in the Uniform Resource Locator you requested or in the e-mail address you're sending a note to. At the other end, the recipient can see the IP address of the Web page requestor or the e-mail sender and can respond by sending another message using the IP address it received.

IP Spoofing

A technique where an attacker attempts to gain unauthorized access through a false source address to make it appear as though communications have originated in a part of the network with higher access privileges. For example, a packet originating on the Internet may be masquerading as a local packet with the source IP address of an internal host. The firewall can protect against IP spoofing attacks by limiting network access based on the gateway interface from which data is being received.

IPSEC
IPSEC is the leading Virtual Private Networking (VPN) standard. IPSEC enables individuals or offices to establish secure communication channels ('tunnels') over the Internet.

ISP
An ISP (Internet service provider) is a company that provides access to the Internet and other related services.

L

LAN
A local area network (LAN) is a group of computers and associated devices that share a common communications line and typically share the resources of a single server within a small geographic area.

M

MAC Address
The MAC (Media Access Control) address is a computer's unique hardware number. When connected to the Internet from your computer, a mapping relates your IP address to your computer's physical (MAC) address on the LAN.

Mbps
Megabits per second. Measurement unit for the rate of data transmission.

MTU
The Maximum Transmission Unit (MTU) is a parameter that determines the largest datagram than can be transmitted by an IP interface (without it needing to be broken down into smaller units). The MTU should be larger than the largest datagram you wish to transmit un-fragmented. Note: This only prevents fragmentation locally. Some other link in the path may have a smaller MTU - the datagram will be fragmented at that point. Typical values are 1500 bytes for an Ethernet interface or 1452 for a PPP interface.

N

NAT
Network Address Translation (NAT) is the translation or mapping of an IP address to a different IP address. NAT can be used to map several internal IP addresses to a single IP address, thereby sharing a single IP address assigned by the ISP among several PCs.

Check Point FireWall-1's Stateful Inspection Network Address Translation (NAT) implementation supports hundreds of pre-defined applications, services, and protocols, more than any other firewall vendor.

NetBIOS
NetBIOS is the networking protocol used by DOS and Windows machines.

P

Packet
A packet is the basic unit of data that flows from one source on the Internet to another destination on the Internet. When any file (e-mail message, HTML file, GIF file etc.) is sent from one place to another on the Internet, the file is divided into "chunks" of an efficient size for routing. Each of these packets is separately numbered and includes the Internet address of the destination. The individual packets for a given file may travel different routes through the Internet. When they have all arrived, they are reassembled into the original file at the receiving end.

PPPoE
PPPoE (Point-to-Point Protocol over Ethernet) enables connecting multiple computer users on an Ethernet local area network to a remote site or ISP, through common customer premises equipment (e.g. modem).

PPTP
The Point-to-Point Tunneling Protocol (PPTP) allows extending a local network by establishing private “tunnels” over the Internet. This protocol it is also used by some DSL providers as an alternative for PPPoE.

R

RJ-45
The RJ-45 is a connector for digital transmission over ordinary phone wire.

Router
A router is a device that determines the next network point to which a packet should be forwarded toward its destination. The router is connected to at least two networks.

S

Server
A server is a program (or host) that awaits and requests from client programs across the network. For example, a Web server is the computer program, running on a specific host, that serves requested HTML pages or files. Your browser is the client program, in this case.

Stateful Inspection
Stateful Inspection was invented by Check Point to provide the highest

level of security by examining every layer within a packet, unlike other systems of inspection. Stateful Inspection extracts information required for security decisions from all application layers and retains this information in dynamic state tables for evaluating subsequent connection attempts. In other words, it learns!

Subnet Mask

A 32-bit identifier indicating how the network is split into subnets. The subnet mask indicates which part of the IP address is the host ID and which indicates the subnet.

T

TCP

TCP (Transmission Control Protocol) is a set of rules (protocol) used along with the Internet Protocol (IP) to send data in the form of message units between computers over the Internet. While IP takes care of handling the actual delivery of the data, TCP takes care of keeping track of the individual units of data (called packets) that a message is divided into for efficient routing through the Internet.

For example, when an HTML file is sent to you from a Web server, the Transmission Control Protocol (TCP) program layer in that server divides the file into one or more packets, numbers the packets, and then forwards them individually to the IP program layer. Although each packet has the same destination IP address, it may get routed differently through the network.

At the other end (the client program in your computer), TCP reassembles the individual packets and waits until they have arrived to forward them to you as a single file.

TCP/IP

TCP/IP (Transmission Control Protocol/Internet Protocol) is the underlying communication protocol of the Internet.

U

UDP

UDP (User Datagram Protocol) is a communications protocol that offers a limited amount of service when messages are exchanged between computers in a network that uses the Internet Protocol (IP). UDP is an alternative to the Transmission Control Protocol (TCP) and, together with IP, is sometimes referred to as UDP/IP. Like the Transmission Control Protocol, UDP uses the Internet Protocol to actually get a data unit (called a datagram) from one computer to another. Unlike

TCP, however, UDP does not provide the service of dividing a message into packets (datagrams) and reassembling it at the other end.

UDP is often used for applications such as streaming data.

URL
A URL (Uniform Resource Locator) is the address of a file (resource) accessible on the Internet. The type of resource depends on the Internet application protocol. On the Web (which uses the Hypertext Transfer Protocol), an example of a URL is 'http://www.sofaware.com'.

V

VPN
A virtual private network (VPN) is a private data network that makes use of the public telecommunication infrastructure, maintaining privacy through the use of a tunneling protocol and security procedures.

VPN tunnel
A secure connection between a Remote Access VPN Client and a Remote Access VPN Server.

W

WLAN
A WLAN is a wireless local area network protected by the Safe@Office appliance.

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