Important Information

Latest Software
We recommend that you install the most recent software release to stay up-to-date with the latest functional improvements, stability fixes, security enhancements and protection against new and evolving attacks.

Latest Documentation
The latest version of this document is at: (http://supportcontent.checkpoint.com/documentation_download?ID=25040)
To learn more, visit the Check Point Support Center (http://supportcenter.checkpoint.com).
For more about this release, see the Check Point 1100 Appliance home page (http://www.checkpoint.com/cp1100).

Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 December 2014</td>
<td>Improved formatting and document layout</td>
</tr>
<tr>
<td>25 August 2014</td>
<td>Added a section for Configuring Cloud Services (on page 22)</td>
</tr>
<tr>
<td></td>
<td>Added a configuration scenario for Configuring Cloud Services (on page 10)</td>
</tr>
<tr>
<td></td>
<td>Updated blade activation sections in the Appliance Configuration chapter</td>
</tr>
<tr>
<td></td>
<td>with lock information (applicable when blades are controlled by Cloud Services)</td>
</tr>
<tr>
<td></td>
<td>Updated Managing System Services (on page 95)</td>
</tr>
<tr>
<td></td>
<td>Corrected Working with the Firewall Access Policy (on page 55)</td>
</tr>
<tr>
<td></td>
<td>Administrator access changes updated in Configuring Local System Administrators (on page 43) and Configuring Administrator Access (on page 44)</td>
</tr>
<tr>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| 25 February 2014 | Added a chapter for Common Configuration Scenarios (on page 10)  
Added an option that lets you set a server with manual access rules only ("Defining Server Objects" on page 59)  
Added an option to set VLAN on DMZ/WAN interfaces ("Configuring Internet Connectivity" on page 28)  
Added a Disable inspection option ("Managing System Services" on page 95)  
Added a Hotspot exceptions feature ("Configuring a Hotspot" on page 37)  
Added an Advanced option on the NAT tab that forces translated traffic to return to the gateway ("Defining Server Objects" on page 59)  
Added an ARP Proxy option when creating a manual NAT rule ("Defining NAT" on page 66)  
Added a DNS suffix option ("Configuring Advanced Remote Access Options" on page 83)  
Added list of characters not allowed for use in various password/shared secret fields  
Improved formatting and document layout  
Added Deploying from a USB Drive  
Updated SNMP section ("Managing SNMP" on page 49)  
Changes made to licensing ("Managing Licenses" on page 45)  
Added a read-only administrator option ("Configuring Local System Administrators" on page 43)  
Updated NAT section ("Defining NAT" on page 66)  
Added a new Mobile client option ("Configuring the Remote Access Blade" on page 78)  
Updated information for Remote Access port settings ("Defining Server Objects" on page 59) |
| 31 July 2013 | Updated Restoring Factory Defaults (on page 111)  
Updated USB port information in Front Panel (on page 112) |
| 2 July 2013 | First release of this document |

Feedback
Check Point is engaged in a continuous effort to improve its documentation.
Please help us by sending your comments (mailto:cp_techpub_feedback@checkpoint.com?subject=Feedback on Check Point 1100 Appliance Locally Managed Administration Guide).
Important Information ................................................................................................. 3
Introduction .................................................................................................................. 8
  Welcome ..................................................................................................................... 8
  Check Point 1100 Appliance Overview ...................................................................... 8
Installation ................................................................................................................... 9
  Setting Up the Check Point 1100 Appliance .............................................................. 9
  Connecting the Cables .............................................................................................. 9
Common Configuration Scenarios .............................................................................. 10
  Configuring Cloud Services ...................................................................................... 10
  Configuring a Guest Network .................................................................................. 11
  Configuring VPN ...................................................................................................... 11
    Configuring Remote Access VPN .......................................................................... 11
    Configuring Site to Site VPN with a Preshared Secret ............................................ 13
    Configuring Site to Site VPN with a Certificate ....................................................... 13
  Configuring QoS ........................................................................................................ 15
  Configuring a Cluster ................................................................................................ 15
  Enabling VoIP Traffic ............................................................................................... 16
Appliance Configuration ............................................................................................. 17
  Introduction to the WebUI Application ...................................................................... 18
  The Home Tab ........................................................................................................... 19
    Viewing System Information .................................................................................. 19
    Controlling and Monitoring Software Blades ......................................................... 19
    Setting the Management Mode .............................................................................. 20
    Configuring Cloud Services ................................................................................... 22
    Viewing the Site Map ............................................................................................. 24
    Viewing 3D Monitoring Reports ............................................................................ 24
  Managing Active Computers in Internal Networks .................................................. 24
  Viewing Security Reports in the Reports Dashboard ................................................... 25
  Using System Tools ................................................................................................... 26
  Managing the Device ................................................................................................ 28
    Configuring Internet Connectivity ......................................................................... 28
    Configuring Wireless Network Settings .................................................................. 30
    Configuring the Local Network .............................................................................. 33
    Configuring a Hotspot ............................................................................................ 37
    Configuring the Routing Table .............................................................................. 38
    Configuring the DNS Server .................................................................................. 39
    Configuring the Proxy Server ................................................................................ 40
    Backup, Restore, Upgrade, and Other System Operations ...................................... 40
    Configuring Local System Administrators .............................................................. 43
    Configuring Administrator Access ......................................................................... 44
    Managing Licenses .................................................................................................. 45
    Managing Device Details ....................................................................................... 46
    Configuring DDNS Account Details ....................................................................... 46
    Managing Date and Time Settings ......................................................................... 46
  Configuring Advanced Settings ................................................................................ 47
  Using System Tools ................................................................................................... 47
    Configuring High Availability ................................................................................ 47
    Managing SNMP ..................................................................................................... 49
    Managing SNMP Traps ........................................................................................... 50
  Managing the Access Policy ..................................................................................... 52
    Configuring the Firewall Access Policy and Blade .................................................. 52
    Working with the Firewall Access Policy ............................................................... 55
Defining Server Objects .......................................................... 59
Working with User Awareness ................................................ 61
Configuring the Quality of Service (QoS) - Bandwidth Control Blade .................................................. 63
Working with the QoS Policy .................................................... 64
Defining NAT ........................................................................... 66
Defining NAT Server Objects ................................................... 68
Advanced - Creating and Editing NAT Rules ............................................. 68
Managing Threat Prevention ..................................................... 70
Configuring the IPS Blade ......................................................... 70
Configuring IPS Exceptions ..................................................... 72
Viewing the Protections List ..................................................... 72
Advanced IPS Configuration .................................................... 73
Configuring the Anti-Virus Blade ................................................ 74
Configuring Anti-Virus Exceptions ............................................. 75
Setting Actions for File Types .................................................... 75
Configuring the Anti-Spam Blade ................................................. 76
Configuring Anti-Spam Exceptions ............................................. 76
Managing VPN ......................................................................... 78
Configuring the Remote Access Blade ......................................... 78
Configuring Remote Access Users ............................................. 79
Configuring Remote Access Authentication Servers ....................... 81
Configuring Advanced Remote Access Options ........................... 83
Configuring the Site to Site VPN Blade ....................................... 84
Configuring VPN Sites ............................................................ 85
Viewing VPN Tunnels ............................................................... 87
Managing Trusted CAs .............................................................. 88
Managing Installed Certificates ................................................ 89
Managing Internal Certificates .................................................. 90
Managing Users and Objects ..................................................... 91
Working with User Awareness ................................................ 91
Configuring Local Users and User Groups .................................. 91
Configuring Local System Administrators .................................. 91
Managing Authentication Servers ............................................. 92
Managing Applications and URLs ............................................. 94
Managing System Services ..................................................... 95
Managing Service Groups ...................................................... 97
Managing Network Objects ..................................................... 98
Managing Network Object Groups ........................................... 99
Logs and Monitoring ............................................................... 100
Viewing Security Logs ............................................................. 100
Viewing System Logs .............................................................. 101
Configuring External Log Servers ............................................. 102
Managing Active Computers in Internal Networks ....................... 104
Viewing VPN Tunnels ............................................................. 104
Viewing Active Connections .................................................. 104
Viewing 3D Monitoring Reports ............................................... 104
Using System Tools ............................................................... 105
Viewing Security Reports in the Reports Dashboard ....................... 105
Viewing an Hourly Report ....................................................... 106
Viewing a Daily Report .......................................................... 106
Viewing a Weekly Report ........................................................ 106
Viewing a Monthly Report ....................................................... 107
Advanced Configuration ................................................................ 108
Upgrade Using a USB Drive ..................................................... 108
Boot Loader ............................................................................ 109
Upgrade Using Boot Loader ................................................... 110
Restoring Factory Defaults ..................................................... 111
Front Panel ............................................................................. 112
Back Panel ............................................................................. 113
Chapter 1

Introduction

In This Section:

Welcome ......................................................................................................................... 8
Check Point 1100 Appliance Overview ........................................................................ 8

Review these documents before doing the procedures in this guide:

- Known limitations (http://supportcontent.checkpoint.com/solutions?id=sk90342)
- Check Point 1100 Appliance Getting Started Guide
  (http://supportcontent.checkpoint.com/documentation_download?ID=22711)

Welcome

Thank you for choosing Check Point's Internet Security Product Suite. We hope that you will be satisfied with this solution and our support services. Check Point products provide your business with the most up to date and secure solutions available today.

Check Point also delivers worldwide technical services including educational, professional and support services through a network of Authorized Training Centers, Certified Support Partners and Check Point technical support personnel to ensure that you get the most out of your security investment.

For additional information on the Check Point Internet Security Product Suite and other security solutions, refer to: http://www.checkpoint.com. For technical assistance, contact Check Point 24 hours a day, seven days a week at:+1 972-444-6600 (Americas) +972 3-611-5100 (International). For additional technical information, refer to: http://support.checkpoint.com
(http://supportcenter.checkpoint.com).

Welcome to the Check Point family. We look forward to meeting all of your current and future network, application and management security needs.

Check Point 1100 Appliance Overview

Check Point 1100 Appliance delivers integrated unified threat management to protect your organization from today's emerging threats. Based on proven Check Point security technologies such as Stateful Inspection, Application Intelligence, and SMART (Security Management Architecture), Check Point 1100 Appliance provides simplified deployment while delivering uncompromising levels of security.

Check Point 1100 Appliance supports the Check Point Software Blade architecture that gives independent and modular security building blocks. Software Blades can be quickly enabled and configured into your solution based on specific security needs.
Chapter 2

Installation

In This Section:

Setting Up the Check Point 1100 Appliance ................................................................. 9
Connecting the Cables ........................................................................................................... 9

Setting Up the Check Point 1100 Appliance

1. Remove the Check Point 1100 Appliance from the shipping carton and place it on a tabletop.
2. Identify the network interface marked as LAN1. This interface is preconfigured with the IP address 192.168.1.1.

Connecting the Cables

To connect the cables on Check Point 1100 Appliance models:

1. Connect the power supply unit to the appliance and to a power outlet. The appliance is turned on once the power supply unit is connected to an outlet. The Power LED on the front panel (on page 112) turns on. This indicates that the appliance is turned on. The Notice LED on the front panel starts blinking. This indicates that the appliance is booting up. When the Notice LED turns off, the appliance is ready for login.
2. Connect the standard network cable to the network interface port (LAN1) on the appliance and to the network adapter on your PC.
3. Connect another standard network cable to the WAN interface on the appliance and to the external modem, external router, or network point (in ADSL models, connect a telephone cable to the ADSL port).
Chapter 3

Common Configuration Scenarios

In This Section:

- Configuring Cloud Services ................................................................. 10
- Configuring a Guest Network .............................................................. 11
- Configuring VPN ................................................................................... 11
- Configuring QoS .................................................................................... 15
- Configuring a Cluster ........................................................................... 15
- Enabling VoIP Traffic ........................................................................... 16

This chapter contains workflows for common configuration scenarios. The workflow steps include links to the related appliance configuration sections when necessary.

Configuring Cloud Services

Introduction

Cloud Services lets you connect your Check Point 1100 Appliance to a Cloud Services Provider that uses a Web-based application to manage, configure, and monitor the appliance.

Prerequisites

Before you can connect to Cloud Services, make sure you have:

- Received an email from your Cloud Services Provider that contains an activation link. Clicking the link automatically connects your Check Point 1100 Appliance to Cloud Services.

  Or

- The Service Center IP address, the Check Point 1100 Appliance gateway ID, and the registration key. Use these details to manually connect your Check Point 1100 Appliance to Cloud Services.

To automatically connect to Cloud Services:

1. Make sure the Check Point 1100 Appliance has been configured with the First Time Configuration Wizard. See the Check Point 1100 Appliance Getting Started Guide.

2. In the email that the Security Gateway owner gets from the Cloud Services Provider, click the activation link.

   After you log in, a window opens and shows the activation details sent in the email.

3. Make sure the details are correct and click Connect.

   For more details, see Configuring Cloud Services (on page 22).

To manually connect to Cloud Services:

1. In the WebUI, go to the Home > Cloud Services page.

2. Do the connect to Cloud Services procedure in Configuring Cloud Services (on page 22).
Configuring a Guest Network

Introduction
In some situations, it is necessary to allow guest access to the Internet from within your organization. At the same time, it might be necessary to restrict access to internal network resources. Configuring a guest network with a Hotspot lets you control network access. If you set user authentication options, you can then monitor the users that connect to the network.

Prerequisites
- You must have a wireless network enabled on your appliance. The guest network is actually a Virtual Access Point (VAP).
- You must define the network interfaces that will redirect users to the Hotspot portal when they browse from those interfaces.

Configuration
1. Go to the Device > Wireless Network page.
2. Click the Guest link and follow the wizard instructions. See Configuring Wireless Network Settings (on page 30).
   a) Make sure that the Use Hotspot checkbox is selected in the wizard.
   b) Set the network protection (unprotected or protected network).
   c) Set the access and log policy options in the Access Policy tab.
3. Make sure you have defined the network interfaces for Hotspot. See Configuring the Local Network (on page 33).
4. Configure the Hotspot - Go to the Device > Hotspot page and set the options. See Configuring a Hotspot (on page 37).
5. If necessary, you can limit access to the Hotspot for specified user groups in the Access section.

Monitoring
Connect to the network and open a browser session. You will see the customized Hotspot portal. Note that you will be shown the Hotspot portal one time in the given timeout period. The default timeout period is 4 hours.

User activity on this network will be logged with user names if the Log traffic option was selected.

Configuring VPN

This section describes how to configure these VPN configuration scenarios:
- Remote access VPN
- Site to site VPN using a preshared secret
- Site to site VPN using a certificate

Configuring Remote Access VPN

Introduction
You can use these options for remote access:
- Check Point VPN clients
- Check Point Mobile clients
- Check Point SSL VPN
• L2TP VPN client

Prerequisites
• On the **VPN > Blade Control** page, make sure:
  - Remote Access control is set to ON and the **Allow traffic from Remote Access users (by default)** option is selected.
  - Select the applicable connection methods.
  - For more details, see Configuring the Remote Access Blade (on page 78).
• If the gateway uses a dynamic IP address, it is recommended to use the DDNS feature. See Configuring DDNS Account Details (on page 46).
• For the Check Point VPN client or Mobile client method, make sure that the applicable client is installed on the hosts. Click the How to connect link for more details.

Remote Access Configuration
There are 3 methods you can use to configure remote access users:
• Local users
• RADIUS users
• AD users

To allow only specified users to connect with a remote access client, set up group permissions for the applicable user type. Select the arrow next to the **Add** option and choose the relevant group option. See Configuring Remote Access Users (on page 79)

To configure local users:
1. For new users:
   a) Go to the **VPN > Remote Access Users** page.
   b) Use the **Add** option to add local users.
   c) Make sure that the **Remote Access permissions** checkbox is selected.
   d) For more details, see Configuring Remote Access Users (on page 79).
2. For existing users:
   a) Go to the **VPN > Remote Access Users** page.
   b) Use the **Edit** option to make sure that the **Remote Access permissions** checkbox is selected.
   c) For more details, see Configuring Remote Access Users (on page 79).

To configure RADIUS users:
1. Go to **VPN > Authentication Servers** and click **Configure** to add a RADIUS server. See Configuring Remote Access Authentication Servers (on page 81).
2. Set the access permissions for RADIUS users by clicking the **permissions for RADIUS users** link.

To configure AD users:
1. Go to **VPN > Authentication Servers** and click **New** to add an AD domain. See Configuring Remote Access Authentication Servers (on page 81).
2. Set the access permissions for Active Directory users by clicking the **permissions for Active Directory users** link.

L2TP VPN Client configuration
For L2TP VPN Client configuration, click the **L2TP Pre-shared key** link to enter the key after you have enabled the L2TP VPN client method.

Advanced Options
For details regarding advanced Remote Access options, for example Office Mode network, see Configuring Advanced Remote Access Options (on page 83).
Monitoring
To make sure that Remote Access is working:
Connect from a remote host to an internal resource using the configured client.

Configuring Site to Site VPN with a Preshared Secret

Introduction
In this Site to Site VPN configuration method a preshared secret is used for authentication.

Prerequisites
- Make sure the Site to Site VPN blade is set to ON and **Allow traffic from remote sites (by default)** option is selected. See Configuring the Site to Site VPN Blade (on page 84).
- The peer device that you are connecting to must be configured and connected to the network. If it is a DAIP gateway, its host name must be resolvable.

Configuration
Enter a host name or IP address and enter the preshared secret information. For more details, see Configuring VPN Sites (on page 85).

Monitoring
To make sure the VPN is working:
1. Send traffic between the local and peer gateway.
2. Go to the **VPN > VPN Tunnels** page to monitor the tunnel status. See Viewing VPN Tunnels (on page 87).

Configuring Site to Site VPN with a Certificate

Introduction
In this Site to Site VPN configuration method a certificate is used for authentication.

Prerequisites
- Make sure the Site to Site VPN blade is set to ON and **Allow traffic from remote sites (by default)** option is selected. See Configuring the Site to Site VPN Blade (on page 84).
- The peer device that you are connecting to must be configured and connected to the network. If it is a DAIP gateway, its host name must be resolvable.
- You must reinitialize certificates with your IP address or resolvable host name. Make sure that the certificate is trusted on both sides.
- VPN encryption settings must be the same on both sides (the local gateway and the peer gateway). This is especially important when using the Custom encryption option.

Configuration
1. Reinitialize certificates - Use the **Reinitialize certificates** option described in Managing Internal Certificates (on page 90). Make sure this is done on both the local and peer gateway (if they are both using locally managed Check Point appliances).
2. Trust CAs on the local and peer gateways - Use one of these procedures:
   - Exchange CAs between gateways
   - Sign a request using one of the gateway’s CAs
   - Authenticate by using a 3rd party CA
   - Authenticate with an existing 3rd party certificate
Do the corresponding steps for the applicable procedure listed in the Trust Procedures section below.
3. Create the VPN site using the certificate authentication.
   a) Follow the instructions in Configuring VPN Sites (on page 85).
   b) To make sure the specified certificate is used, in the Advanced tab > Certificate Matching section, fill in the peer gateway's certificate details.

Trust Procedures

Exchange CAs between gateways
Make sure the CA is uploaded on both the local and peer gateways by adding the Trusted CA of the peer gateway. Use the Add option, see Managing Trusted CAs (on page 88).

Sign a request using one of the gateway's CAs
You create a request from one gateway that must be signed by the peer gateway’s CA.
1. Use the New Signing Request option in Managing Installed Certificates (on page 89).
2. Export this request using the Export option.
3. Sign the request on the peer gateway using the peer gateway’s internal CA.
   If the peer gateway is a locally managed Check Point gateway, go to the VPN > Trusted CAs page and use the Sign a Request option. For more details, see Managing Trusted CAs (on page 88).
4. Upload the signed request to the local gateway.
   a) Go to the VPN > Installed Certificates page.
   b) Select the installed certificate that you asked the remote peer to sign.
   c) Upload the certificate with the Upload Signed Certificate option. See Managing Installed Certificates (on page 89).
5. Make sure that the CA is installed on both of the gateways. Use the Add option in Managing Trusted CAs (on page 88).

Authenticate by using a 3rd party CA
You create a signing request from each peer gateway and sign it using a 3rd party CA using the steps above in Sign a request using one of the gateway's CAs.
Note that a 3rd party CA can either issue *.crt, *.p12, or *.pfx certificate files.
1. Upload the certificate using the appropriate upload option.
   a) Go to the VPN > Installed Certificates page.
   b) Select the installed certificate that you asked the remote peer to sign.
   c) Upload the certificate with the Upload Signed Certificate or Upload P12 Certificate option. See Managing Installed Certificates (on page 89).
2. Make sure that the 3rd party CA is installed on both of the gateways. Use the Add option in Managing Trusted CAs (on page 88).

Authenticate with an existing 3rd party certificate
1. Create a P12 certificate for the local and peer gateway.
2. Upload the P12 certificate using the Upload P12 Certificate option on each gateway.
3. Make sure that the 3rd party CA is installed on both of the gateways. Use the Add option in Managing Trusted CAs (on page 88).

Monitoring
To make sure the VPN is working:
1. Pass traffic between the local and peer gateway.
2. Go to the VPN > VPN Tunnels page to monitor the tunnel status. See Viewing VPN Tunnels (on page 87).
Configuring QoS

Introduction
The QoS (bandwidth control) policy is a set of rules that lets you set bandwidth parameters. These parameters control the flow of traffic to and from your network. These rules make sure that:

- Important traffic is prioritized.
- Your business can work with minimum disruption when there is network congestion.

QoS can be activated on Internet connections and requires at least one Internet connection to be configured with the maximum download and/or upload speeds. You get the speed information from your ISP.

QoS policy rules apply separately on each configured Internet connection.

Prerequisites
From the Access Policy > QoS > Blade Control page, make sure the QoS blade is turned on.

Configuration
1. Go to the Device > Internet page, select an Internet connection, and click Edit.
2. In the Advanced tab, edit the QoS Settings. These values are used as a 100% percent baseline when calculating QoS weight. For more details, see Configuring Internet Connectivity (on page 28).
3. You can use these options:
   - A default QoS policy that requires defining only a number of parameters. See Configuring the Quality of Service (QoS) - Bandwidth Control Blade (on page 63)

Configuring a Cluster

Introduction
You can configure two appliances in a cluster configuration for High Availability. High Availability makes sure to keep connections in the organization's network working when there is a failure in a cluster member. Only one gateway is active during a given time. When there is a failover, the standby member becomes active.

Only Cluster High Availability is supported. There is no load sharing between the members of the cluster.

Prerequisites
- Bridge and switch configurations are not supported in cluster configuration. You must delete these before you start to configure a cluster (in the WebUI > Device > Local Network page).
- Both appliances that are designated for use as cluster members must have the same hardware, firmware, and licenses.
- It is recommended to designate the same LAN port for the Sync interface. The default Sync interface is LAN2/SYNC.

Note - Connect the Sync cable only after completing the First Time Configuration Wizard and removing the switch on both appliances. No additional configuration is required on both members.

Configuration
1. Complete the First Time Configuration Wizard on both appliances. In Step 5 (the Local Network page of the wizard), clear the Enable switch on LAN ports checkbox. If you forgot to do this, you can delete the switch from the WebUI > Device > Local Network page.
2. Configure network settings on the appliance that will be the primary member.
3. Connect a sync cable between the appliances.
4. For the primary cluster member:
   a) Connect to the appliance that will be the primary cluster member.
b) In the WebUI, go to the **Device > High Availability** page and click **Configure Cluster**.

c) Do the wizard steps for the primary member option. For more details, see Configuring High Availability (on page 47).

5. For the secondary cluster member:
   a) Connect to the appliance that will be the secondary cluster member.
   b) Go to the **Device > High Availability** page and click **Configure Cluster**.
   c) Do the wizard steps for the secondary member option. For more details, see Configuring High Availability (on page 47).

6. Complete other configuration requirements such as access policy, VPN, and Threat Prevention parameters. This will configure the active member and will be synchronized to the standby member. On failover, the standby member will become the active member.

**Monitoring**

After the cluster is successfully configured, it is recommended to connect to my.firewall. This redirects you to the active cluster member.

You can still log in to each appliance by connecting to `http://<IP>:4434` where `<IP>` is the IP address of a specified member.

Note that the WebUI of the standby cluster member only has one tab, the Device tab. Not all options are available since all cluster configuration is done through the active member.

The WebUI **Device > High Availability** page shows the status of each member.

### Enabling VoIP Traffic

**Introduction**

Do the below configuration procedures to fully allow SIP traffic to pass through the gateway when:

- The server is located on external networks.
- The gateway's NAT configuration is set to its default settings (with internal networks hidden behind its external IP address).

**Configuration**

**To allow application-level inspection and NAT of the SIP protocol:**

1. Go to the **Users & Objects > Services** page.
2. Edit the **SIP_UDP** and **SIP_TCP** built in services by enabling SIP inspection on both services - Clear the **Disable inspection for this service** checkbox in each service object. For more details, see Managing System Services (on page 95).

**To allow the SIP server to connect to internal phones from the Internet:**

1. Go to the **Access Policy > Policy** page.
2. Add a rule to the **Incoming, Internal and VPN traffic** Rule Base that allows SIP traffic.
   - For example:
     - Source - Any
     - Destination - Any
     - Service - SIP
     - Action - Accept
   - For more details, see Working with the Firewall Access Policy (on page 55).
3. If you know the IP address of the SIP server, you can use it as the source of this rule.
4. Optionally - you can configure if this rule will be logged or not.
Chapter 4

Appliance Configuration

In This Section:

- Introduction to the WebUI Application ................................................................. 18
- The Home Tab ........................................................................................................... 19
- Managing the Device .............................................................................................. 28
- Managing the Access Policy .................................................................................. 52
- Managing Threat Prevention ................................................................................. 70
- Managing VPN ......................................................................................................... 78
- Managing Users and Objects .................................................................................. 91
- Logs and Monitoring ............................................................................................... 100

This chapter contains instructions that help you configure the Check Point 1100 Appliance and understand special Check Point 1100 Appliance features.
Introduction to the WebUI Application

Check Point 1100 Appliance uses a web application to configure the appliance.

After you use the First Time Configuration Wizard (see the Check Point 1100 Appliance Getting Started Guide), when you connect to the appliance with a browser (with the appliance's IP or, if using the appliance as a DNS proxy or DHCP server, to "my.firewall"), it redirects the web page to a secure https site and asks for administrator credentials. When you log in, you can select the Save user name checkbox to save the administrator's user name. The name is saved until you clear the browser's cookies.

Logging in correctly opens the Home > System page of the WebUI application. The left pane lets you navigate between the different pages of each of these tabs:

- Home
- Device
- Access Policy
- Threat Prevention
- VPN
- Users & Objects
- Logs & Monitoring

To log in to the WebUI in a different language:

In the browser page that shows the Login window, select the necessary language link at the bottom of the page.

The log in page changes immediately to the selected language. The next login from the same computer will be in the selected language (saved in a browser cookie). The language is kept until you clear the browser's cookies.

Note - If the locale of a user matches a localized WebUI, the Login window will automatically load in the specified language. Only English is supported as the input language.
The Home Tab

Viewing System Information

The Home > System page shows an overview of Check Point 1100 Appliance.

Check Point 1100 Appliance requires only minimal user input of basic configuration elements, such as IP addresses, routing information, and blade configuration. The initial configuration of Check Point 1100 Appliance can be done through a First Time Configuration Wizard. Once initial configuration has been completed, each subsequent entry using http://my.firewall shows the WebUI Home > System page.

- **System Information** - Shows the appliance model, installed software version, name, MAC address, system date and time (with the GMT setting), and system uptime.
- **Network** - Shows Internet information and wireless network status. You can click the links to configure Internet and Wireless options (if applicable).
- **Statistics** - Shows live data graphs of packet rate and throughput.

Controlling and Monitoring Software Blades

The Home > Security Dashboard page shows you the active blades and lets you quickly navigate to the blade configuration page.

It also gives you:

- Access to the basic settings of the blades with the Settings button (cogwheel icon) and lets you activate the blades.
- Access to statistics regarding each blade (graph icon)
- Alerts you if there are some blades that are missing licenses, service blades which are not up-to-date, and active blades which require additional configuration (for example, site-to-site VPN where the user hasn't configured any sites). When applicable, there is a triangle in the upper right hand corner of the specified blade.

The software blades are shown in three groups on this page according to where they are configured in the WebUI:

- **Access Policy** - Contains the Firewall, Applications & URL Filtering, User Awareness, and QoS blades.
- **Threat Prevention** - Contains the Intrusion Prevention (IPS), Anti-Virus, and Anti-Spam blades.
- **VPN** - Contains the Remote Access and Site to Site VPN blades. It also contains certificate options.

You can click the tab name link or software blade link to access the tab for further configuration.

To turn a software blade on or off:

Slide the lever of the specified blade to the necessary ON or OFF position. When turning off the Firewall blade, click Yes in the confirmation message.

Note - Software blades that are managed by Cloud Services show a lock icon. You cannot toggle between on and off states. If you change other policy settings, the change is temporary. Any changes made locally will be overridden in the next synchronization between the gateway and Cloud Services.

To see setting information:

1. Click the cogwheel icon next to the On/Off lever.
   - The blade settings window opens.
2. View the details or select options to change current settings.
3. Click Apply.

To view statistics:

1. Click the bar graph icon.
The blade statistics window opens.

2. If the blade is turned on:
   a) View the graph and details.
   b) To go to other blade statistics, click the arrows in the header.

3. If the blade is turned off:
   a) Click View demo to see an example of the statistics shown.
   b) Click the X icon to close the demo.

To view an alert:
1. Hover over the alert triangle.
2. Click the relevant link if applicable.

Setting the Management Mode

The Home > Security Management page shows information regarding the management mode of Check Point 1100 Appliance. You can also test Internet Connectivity from this page.

Note - When Cloud Services is turned on, you cannot change the management mode to Centrally Managed. To change to Centrally Managed you must first disconnect from the Cloud Services Provider.

To set the management type:
1. Select one of the options:
   - Locally - To manage the Check Point 1100 Appliance using the local web application (WebUI). Click Apply and then Yes when asked to confirm.
   - Centrally - To manage the Check Point 1100 Appliance using the Security Management Server.
2. Click Apply.
   When you change to Local management, a confirmation message is shown.
3. Click Yes.

When centrally managed, it shows the trust status between Check Point 1100 Appliance and the Security Management Server. Once a policy has been prepared in SmartDashboard, you can fetch the policy from this window.

Security Management Server

In this section you can view the status of the management connection, last policy installation, adjust trust settings, and initialize a connection.
1. In the Security Management Server section, click **Settings** to adjust trust settings or **Setup** to initialize a connection. The Welcome to the Security Management Server Configuration Wizard shows.

2. Click **Next**. In the One Time Password (SIC) page select an option for authenticating trusted communication:
   - Initiate trusted communication securely by using a one-time password - the one-time password is used to authenticate communication between the Check Point 1100 Appliance and the Security Management server in a secure manner. Enter a one-time password and confirm it. This password is only used for establishing the initial trust. Once established, trust is based on security certificates.

   ![Important] - This password must be identical to the Secure Communication authentication one-time password configured for the Check Point 1100 Appliance object in the SmartDashboard of the Security Management Server.

   - Initiate trusted communication without authentication (not secure) - select this option only if you are sure that there is no risk of imposture (for example, when in a lab setting).

3. Click **Next**. In the Security Management Server Connection page, select a connection method:
   - To connect to the Security Management Server now, select **Connect to the Security Management Server now**, enter the Security Management Server IP or name and click **Connect**. Upon successful connection to the Security Management server, the security policy will automatically be fetched and installed.

   If the Security Management Server is deployed behind a 3rd party NAT device, select **Always use this IP address** and manually enter the IP address the appliance should connect to in order to reach the Security Management Server. This IP address will override, from this point on, the automatic calculating mechanism that determines what is the routable IP address of the Security Management Server for each appliance.

   If trust was established but the gateway could not fetch the policy, you can investigate the issue with the Security Management server administrator and following resolution, attempt to fetch it by clicking the Fetch Policy button that appears instead of the Connect button.

   - To connect to the Security Management server later, select **Connect to the Security Manager server later**.

4. Click **Finish**.

**To reinitialize trusted communication with the Security Management Server:**

1. In the Security Management Server section, click **Advanced** to reinitialize trusted communication.

2. Click **Reinitialize Trusted Communication**.
   A Warning message shows.

3. Click **Yes**.

   ![Note] - You need to coordinate this operation with the Security Management Server administrator, as reinitialization is necessary on both sides.

**Security Policy**

To obtain the security policy from the Security Management Server, click **Fetch Policy**. This option is available only if trust has been established with the Security Management Server.
Internet

To test connectivity, click **Test Connection Status**. A status message shows the results of the test. You can click **Settings** to configure Internet connections.

For more information on working in an environment that is centrally managed, see the *Check Point 1100 Appliance Centrally Managed Administration Guide* (http://supportcontent.checkpoint.com/documentation_download?ID=23999).

**Configuring Cloud Services**

The Home > Cloud Services page lets you connect the Check Point 1100 Appliance to Cloud Services. The Cloud Services Provider uses a Web-based application to manage, configure, and monitor your Check Point 1100 Appliance.

You can connect the Check Point 1100 Appliance to Cloud Services using one of these methods:

- Click the activation link in the email that the Security Gateway owner gets from the Cloud Services Provider. After you log in, a window opens and shows the activation details sent in the email. Make sure they are correct and click **Connect**. If the appliance is connected to a different Cloud Services Provider, you will be asked if you want to continue.

- Enter this page and use the connection procedure below.

When you successfully connect, a security policy and other settings are pushed to the appliance. The settings defined by Cloud Services contain your activated blades, security policy, and service settings.

After Cloud Services are turned on, these identification details are shown in the WebUI:

- At the bottom of the login page - The name defined by the Cloud Services Provider for your Security Gateway and the MAC address of the Check Point 1100 Appliance.
- At the top of the WebUI application (near the search box) - The name of your Check Point 1100 Appliance.

There are three sections on this page:

- **Cloud Services** - This section shows Cloud Services details.
  - The **Configure** option lets you configure initial connectivity.
Appliance Configuration

- When connected, you can click **Details** to see connectivity details and **Fetch now** to get updated activated blades, security policy and service settings.
- When disconnected, you can click **Refresh** to try and reconnect to Cloud Services.

**Managed Security Blades** - Shows a colorful or black and white icon for defined security blades. You can click the icon text to open the corresponding page in the WebUI.
- Colorful icon - Shown for a blade that is remotely managed by Cloud Services. The blade is turned on in the plan.

  **Note** - A lock icon is shown on blade pages that are remotely managed. You cannot toggle between the on and off states. If you change other policy settings, the change is temporary. Any changes made locally will be overridden in the next synchronization between the gateway and Cloud Services.

- Gray icon - Shown for a blade that is remotely managed by Cloud Services. The blade is turned off in the plan.
- No icon - Shown for a security blade that is locally managed in the Check Point 1100 Appliance. The blade is not managed by Cloud Services.

If no blades are remotely managed, all of the blades icons are gray.

- **Available Services** - Shows the services that are managed by the Cloud Services Provider. If a service has a **Settings** button, you can click it to show read-only setting information. You cannot change the setting information. Services in a gray font show services that are not provided by Cloud Services.
  These are the available services:
  - Reports - Periodic network and security reports sent by email. Click **Settings** to see the time frames set for your gateway.
  - Logs - Logs are stored with the Cloud Services Provider.
  - Dynamic DNS - A persistent domain name is set by Cloud Services.
  - Firmware Upgrades - Firmware upgrades are managed remotely by Cloud Services.
  - Periodic Backup - Backups are scheduled by Cloud Services.

Before you can connect to Cloud Services, make sure you have:

- Received an email from your Cloud Services Provider that contains an activation key for your Check Point 1100 Appliance and also an activation link

  Or

- The Service Center IP address, the Check Point 1100 Appliance gateway ID, and the registration key

Connecting to Cloud Services includes these steps:

- Step 1 of 3
  - Connecting to Cloud Services Provider
  - Making sure the gateway registration information is correct
  - Establishing a secure connection

- Step 2 of 3
  - Preparing to get security policy and settings
  - Getting security policy and settings

- Step 3 of 3 Installing security policy and settings

When you connect for the first time, the appliance must make sure that the certificate of the Cloud Services Provider against its trusted Certificate Authority list. If verification fails, you get a notification message. You can stop or ignore the verification message and continue.

**To connect to Cloud Services:**

1. Click **Configure** or **Edit**.
   - The Configure Cloud Services window opens.
2. Select **Activation key** or **Activation details** and enter the specified information.
3. Click **Apply**.
The Check Point 1100 Appliance tries to connect to the Cloud Services Provider. The Cloud Services section shows a progress indicator and shows the connection steps.

4. If you are shown a message that the identity of your Cloud Services Provider cannot be verified but you are sure of its identification, click Resolve and then Ignore and reconnect.

When connectivity is established, the Cloud Services section at the top of the page shows:

- The date of the synchronization
- The On/Off lever shows that Cloud Services is turned on.

A Cloud Services Server widget is shown on the status bar and shows Connected. Clicking this widget opens the Cloud Services page.

To get an updated security policy, activated blades, and service settings:

Click Fetch now.

The Check Point 1100 Appliance gets the latest policy, activated blades, and service settings from Cloud Services.

**Viewing the Site Map**

The Home > Site Map page shows a site map of the WebUI. It shows all of the tabs and the pages they contain.

You can open any of the pages directly from the Site Map page by clicking the link.

**Viewing 3D Monitoring Reports**

The 3D Monitoring page shows statistics from the last hour for security events and network analysis. Each time you enter this page, the latest data is shown. You can click Refresh to update information.

To see sample reports, click View Demo. Charts show the top 5 items for different aspects of security events and bandwidth consumption (user usage, applications used, sites visited, and threats such as viruses).

Click the Graph icon or the Table icon to toggle between different layouts of the information for each of the sections.

Click the Information icon to show more details for the statistics shown in the section. Then hover over the specific data to see its description.

You can click Print to open a print-friendly view of the reports.

**Managing Active Computers in Internal Networks**

The Active Computers page shows a list of the devices that have been identified in internal networks. Information shown includes:

- Object name
- IP/MAC address
- Device/User Name - Shows a device/user name if the information is available to the Check Point 1100 Appliance through DHCP or user awareness.
- Services - Shows incoming and outgoing services. Incoming services usually indicate servers.
- Zone - Shows if the appliance is connected physically or through a wireless connection.
- Traffic - Shows upload and download packet rates when traffic monitoring is active.

You can use these buttons:

- Save as - Lets you save a selected device as a network object or server. When you select this option, the New Network Object window or New Server Wizard opens. Enter the information in the fields and click Apply. Use these objects to reserve IP addresses to MAC addresses in the DHCP server and also
add this object name as a host in the local DNS service. Network objects and server objects can be used in the security configurations. For example, in the Access Policy and IPS exceptions. A server object also allows you to configure access and NAT if applicable as part of the object. If access and/or NAT are configured, automatic access rules are created in the Access Policy rule base.

- **Filter** - Lets you filter the list according to servers, active devices, or known devices.
- **Details** - Select a row in the list and click Details to show additional properties of the device.
- **Refresh** - Refreshes the information in the list.
- **Start/Stop Traffic Monitor** - You can click Start Traffic Monitoring to gather upload and download packet rates for active computers. This information is shown in the added Traffic column in the table. This is an operation that may slightly affect performance. To stop, click Stop Traffic Monitoring. Note that the monitoring information is no longer available and the Traffic column not shown in the table.

Note - This page is available from the Home and Logs & Monitoring tabs.

**Viewing Security Reports in the Reports Dashboard**

The Reports Dashboard page shows different network and security reports by time frame (hourly, daily, weekly, and monthly). There are two elements that influence report generation:

- Rounding off of time
- System uptime

**Rounding Off of Time**

The times shown in generated reports are rounded down:

- For hourly reports - At one minute intervals. For example, if you generate a report at 10:15:45 AM, the report represents data from 9:15 to 10:15 AM.
- For daily reports - At hourly intervals. For example, if you generate a report at 10:15 AM, the report represents data from the last 24 hours ending at 10:00 AM of the current day.
- For weekly reports - At two hour intervals, starting with 00:00, 02:00, 04:00, 06:00 and so on. For example, if you generate a report at 09:55 AM, the report represents data from the last week ending at 08:00 AM of the current day.
- For monthly reports - At four hour intervals, starting with 00:00, 04:00, 08:00, 12:00 and so on. For example, if you generate a report at 11:15 AM, the report represents data from the last month ending at 08:00 AM of the current day.

**System Uptime**

In the first 24 hour cycle after an appliance starts up, the system adds another time interval to the delta of the next applicable report interval.

For example, for weekly reports that are generated at pair hour intervals, the appliance requires 2 more hours plus the delta for the first applicable pair hour.

- For an appliance that started at 00:00 AM - The first weekly report is generated at 04:00 AM. The total of 4 hours derives from the delta of the first applicable pair hour which is 02:00 and the added 2 hours. The total wait is 4 hours.
- For an appliance that started at 01:59 AM - The first weekly report is generated at 04:00 AM. The generated time derives from the delta of the first applicable pair hour which is 02:00 and the added 2 hours. The total wait is 2 hours.

Therefore, the generation of reports after starting up an appliance will be possible:

- For hourly reports - 2-3 minutes from startup.
- For daily reports - 1-2 hours from startup.
- For weekly reports - 2-4 hours from startup.
• For monthly reports - 4-8 hours from startup.

Note - Only the last generated report for each report type is saved in the appliance. When you generate a new report, you override the last saved report for the specified type.

To generate a report:
Click Generate or Regenerate (if a report already exists).
The date and time link shows the date and time of the report generation. You can click the link to see the report.

Note - This page is available from the Home and Logs & Monitoring tabs.

Using System Tools
The Tools page contains options for pinging or tracing an IP address, performing a DNS lookup, showing the routing table, generating a CPInfo file, capturing packets, and resource monitoring.

To monitor system resources:
1. Click Monitor System Resources. The System Resources page opens and shows the following information:
   • CPU Usage History (automatically refreshed)
   • Memory Usage History - memory is calculated without memory that was preallocated to handle traffic and without cache memory. This gives a more accurate picture of the actual memory usage in the appliance but it may differ from figures you receive from Linux tools. The information is automatically refreshed.
   • Disk Usage - click the Refresh button for the most updated disk usage information.
2. Click Close to return to the Tools page.

To show the routing table:
1. Click Show Routing Table. The output appears in the Command Output window.
2. Click Close to return to the Tools page.

To generate a CPInfo file:
1. Click Generate CPInfo File. A message next to the button shows the progress.
2. Click Download CPInfo File to view or save the CPInfo file.

To ping or trace an IP address:
1. Enter an IP or host name in the Host Name or IP Address field.
2. Click Ping or Trace Route. The output appears in the Command Output window.
3. Click Close to return to the Tools page.

To perform a DNS lookup:
1. Enter a Host Name or IP Address.
2. Click Lookup. The output appears in the Command Output window.
3. Click Close to return to the Tools page.
To capture packets:
If a packet capture file exists, a note shows the date of the file and you can download it before you start a new packet capture that will overwrite the existing file.

1. Select an option from the Select Network list.
2. Click Start and then Stop when you want to stop packet capturing.
3. Click Download File to view or save the capture file.

You can activate packet capture and go to other WebUI application pages while the packet capture runs in the background. However, the packet capture stops automatically if the WebUI session ends. Make sure you return to the packet capture page, stop and download the capture result before you end the WebUI session.

**Note** - The capture utility uses tcpdump. "fw monitor" is available through the command line interface.

This page is available from the Home, Device, and Logs & Monitoring tabs.
Managing the Device
This section describes how to set up and manage your Check Point 1100 Appliance.

Configuring Internet Connectivity
The Device > Internet page shows how Check Point 1100 Appliance connects to the Internet. You can configure a single Internet connection or multiple connections in High Availability or Load Balancing configurations. Once multiple Internet connections are defined, the page shows them in a table, where you can add a new connection and edit, delete, or disable existing connections. When there are multiple Internet connections, you can select which mode to use - High Availability or Load Balancing.

It is recommended to contact your local Internet Service Provider (ISP) to understand how to configure your specific Internet connection.

To configure Internet connectivity:
1. Click Configure Internet (if not configured at all), Add (for another Internet connection), or Edit.
   The New or Edit Internet Connection window opens.
2. Configure the fields in the tabs:

   Configuration tab
   ○ Connection name - Enter a name for the connection or leave the default "InternetN" label (where N indicates an incrementing number).
   ○ Interface name - Select WAN or DMZ for most types of Internet connections or USB/Serial for cellular or analog modems. In ADSL models, select ADSL.
   ○ Connection type - Select the connection type:
     - DHCP - Dynamic Host Configuration Protocol (DHCP) automatically issues IP addresses within a specified range to devices on a network. The device retains the assigned address for a specific administrator-defined period.
     - Static IP - A fixed (non-dynamic) IP address.
     - PPPoE - A network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames. It is used mainly with DSL services where individual users connect to the DSL modem over Ethernet and in plain Metro Ethernet networks.
     - PPTP - The Point-to-Point Tunneling Protocol (PPTP) is a method for implementing virtual private networks. PPTP uses a control channel over TCP and a GRE tunnel operating to encapsulate PPP packets.
     - L2TP - Layer 2 Tunneling Protocol (L2TP) is a tunneling protocol used to support virtual private networks (VPNs). It does not provide any encryption or confidentiality by itself; it relies on an encryption protocol that it passes within the tunnel to provide privacy.
     - Bridge - Connects multiple network segments at the data link layer (Layer 2).
     - Cellular Modem - Connect to the Internet using a wireless modem to a wireless ISP. For this option select the USB/Serial option in Interface name.
     - Analog Modem - Connect to the Internet using an analog modem through a USB or serial port. For this option select the USB/Serial option in Interface name.
     - ADSL - Connect to the Internet using ADSL. This option is only available in ADSL models.
       Fill in the fields that are shown for the connection type. Note - You cannot use these characters when you enter a password or shared secret: { } [ ] ` ~ | ' "
     - Use connection as VLAN - Select this checkbox to add a virtual Internet interface. Relevant for WAN or DMZ interfaces only and static, DHCP, PPPoE, PPTP, and L2TP connection types.
     - VLAN ID - Enter a VLAN ID between 1 and 4094.
Connection Monitoring tab

- **Automatically detect loss of connectivity to the default gateway** - Select this option to detect connectivity loss by sending ARP requests (pinging) to the default gateway and expecting responses.

- **Monitor connection state by sending probe packets to one or more servers on the Internet** - Select this option to detect connectivity loss by using more methods and servers.
  - **Connection probing method** - Select one of the options.
    - **Ping addresses** - When selecting this option you can configure up to three servers by IP address or host name.
    - **Probe DNS servers** - When selecting this option the appliance probes the DNS servers as defined in the Internet connection and expects responses.

Advanced tab

For PPPoE

- **IP Address Assignment** - In Local tunnel IP address, select if the IP address is obtained automatically or manually configured. If manually configured, enter the IP address.

- **Service Provider Settings** - In Service, enter a service name (not mandatory) and select the Authentication method.

- **Connect on demand** - Select the Connect on demand checkbox if necessary. This is relevant only when you are in high availability mode.

For PPPoA (only when ADSL is supported)

- **IP Address Assignment** - Select if the local tunnel IP address is obtained automatically or manually configured. If manually configured, enter the IP address.

- **Connect on demand** - Select the Connect on demand checkbox if necessary. This is relevant only when you are in high availability mode.

For PPTP and L2TP

- **IP Address Assignment** -
  - In Local tunnel IP address, select if the IP address is obtained automatically or manually configured. If manually configured, enter the IP address.
  - In WAN IP assignment, select if the WAN IP address is obtained automatically or manually configured. If manually configured, enter the IP address, Subnet mask, and Default gateway.

- **Service Provider Settings** - In Service, enter a service name (not mandatory) and select the Authentication method.

- **Connect on demand** - Select the Connect on demand checkbox if necessary. This is relevant only when you are in high availability mode.

Port Settings

- If necessary, select **Use custom MTU value** and set the MTU size. Note that for a DMZ interface the MTU value is applied to all LAN ports.

- **MAC address clone** - Choosing Override default MAC address lets you override the default MAC address used by the Internet connection. This is useful when the appliance replaces another device and wants to mimic its MAC address.

- If necessary, select **Disable auto negotiation**. This lets you manually define the link speed of the Internet connection.
  - Select the **Link Speed**.

QoS Settings (bandwidth control)

To enable QoS bandwidth control for download and upload for this specified connection, select the applicable **Enable QoS (download)** and/or **Enable QoS (upload)** checkboxes. Enter the maximum Kbps rates for the selected options as provided by your ISP for the Internet upload and download bandwidth.

Make sure that the QoS blade has been turned on. You can do this from Home > Security Dashboard > QoS > ON.

ISP Redundancy
Multiple Internet connections can be configured in High Availability or Load Sharing modes. When you configure more than one Internet connection, the Device > Internet page lets you toggle between these options. The Advanced setting of each Internet connection lets you configure each connection's priority or weights as according to the set mode.

- Clear the Route traffic through this connection by default checkbox when you want this Internet connection to not be used as a default route for this gateway. Such a connection will be used by the device only if specific, usually service-based, routing rules will be defined for it. This is commonly used when you have a connection that is used for dedicated traffic. When clearing this option, this connection does not participate in High Availability or Load Balancing.

- High Availability - Priority - Select the priority for the connection. Lower priority connections will only be used if higher priority connections are unavailable.

- Load Balancing - Weight - The traffic to the Internet is divided between all available connections according to their weights.

### Configuring Wireless Network Settings

The Device > Wireless Network page shows the wireless network settings (if applicable). You can configure your main wireless network and also additional guest or standard wireless networks (Virtual Access Points (VAPs)).

- **Guest** wireless network - Uses hotspot by default and is unprotected (no password required).

- **Standard** wireless network - Is a protected wireless network that requires a password and does not use a hotspot by default.

Once additional wireless networks are defined, the page shows them in a table, where you can add a new guest or standard wireless network (VAP) and edit, delete, or disable existing ones.

**To turn the Wireless network on or off:**

- Select the On or Off option. If you have configured multiple VAPs, selecting Off will turn them all off. Note that if you turn off the wireless radio and then turn it back on, the VAPs will remain disabled. To enable the VAPs, you must select the relevant entries in the table and click Enable.

**To customize Hotspot:**

- Click the Hotspot link. See the Device > Hotspot page for information.
To add or edit a wireless network:

1. Click **Edit wireless network settings** to edit the main wireless network.

2. To add an additional guest or standard network to the main network, click the **Guest** or **Standard** link on the page. Once defined, it shows in a table on the page where you can also create additional networks by clicking **New**. Editing one of the additional guest or standard networks (VAPs), can be done by selecting an entry from the table and clicking **Edit**.

   The New/Edit Wireless Network window opens.

3. Configure the fields in the tabs:

   **Configuration tab**

   - **Network name (SSID)** - Enter a name for the wireless network or use the default name. This is the name shown to clients that look for access points in the transmission area.

   - **Use Hotspot** - Select this checkbox to redirect users to the Hotspot portal before allowing access from this interface. Hotspot configuration is defined in the Device > Hotspot page.

   - **Radio settings** - Click the button and select the correct **Operation mode**, **Channel**, **Channel width**, and **Transmitter power**. This configuration is global for all wireless networks. Some options may not available or allowed depending on your country's wireless standards.

   **Configuration tab > Wireless Security**

   - **Protected network (recommended)** - This is the recommended wireless security setting.

     - **Security type** - Select the security technology used in your wireless network. WPA/WPA2 is the most compatible option. WPA2 is the most secure.

     - **Encryption type** - Select the encryption method.

     - **Authenticate using** - Select **Password** or **RADIUS server (Enterprise mode)** to determine how the users authenticate.

       The Password option allows a single password for all users. This option is known as **WPA Personal**.

       The RADIUS servers (Enterprise mode) option requires defining RADIUS servers in the Users & Objects > Authentication Servers page. Each user that tries to connect to the wireless network is authenticated through the RADIUS server. This option is also known as **WPA Enterprise**.

     - **Network password** - When authenticating using a password, enter a password or click **Generate** for an automatically generated password.

       - **Show** - To see the password, select this option. To hide it, clear the checkbox.

   - **Unprotected network (not recommended)** - Without a password, any wireless client can connect to this network. This option is not recommended.

   **Configuration tab > Advanced Settings**

   - **Hide the Network Name (SSID)** - When selected, this wireless network name is not automatically shown to users scanning for them. Connecting to the wireless network can be done manually by adding the specified network name.

   - **Allow Station-to-Station Traffic** - When selected, allows wireless stations on this network to communicate with each other. When cleared, traffic between wireless stations is blocked.

   - **Enable MAC address filtering** - When selected, by default, all wireless devices are not allowed to connect to the wireless network. To allow a specific device to connect, add a new MAC address to the table. Click **New**, enter the device's **MAC address** and click **Apply**.

**Wireless Network tab > Interface Configuration**

- **Assigned to** - Select **Separate network** or one of the existing configured networks. When selecting a separate network configure this information:

  - **IP address**
  - **Subnet mask**

**Wireless Network tab > DHCP Server**

Select one of the options:

- **Enabled** - Enter the **IP address range** and if necessary the **IP address exclude range**. The appliance's own IP address is automatically excluded from this range. You can also exclude or reserve
specific IP addresses by defining network objects in the Users & Objects > Network Objects page. Reserving specific IP addresses requires the MAC address of the device.

- **Relay** - Enter the DHCP server IP address.
- **Disabled**

**Access Policy tab**

These options create automatic rules that are shown in the Access Policy > Firewall Policy page.

- **Allow access from this network to local networks (Wireless network is trusted)**
- **Log traffic from this network to local networks**

**DHCP Server Options tab**

The values for the DHCP options configured on this tab will be distributed by the DHCP server to the DHCP clients.

This tab is only available when the wireless network is a separate network and a DHCP server is configured on it.

**DHCP Server Options tab > DNS Server**

Select one of these options:

- **Auto** - This uses the DNS configuration of the appliance as configured in the Device > DNS and Device > Internet pages.
- **Use the following IP addresses** - Enter the IP addresses for the **First DNS server**, **Second DNS server**, and **Third DNS server**.

**DHCP Server Options tab > Default Gateway**

Select one of these options:

- **Use this gateway’s IP address as the default gateway**
- **Use the following IP address** - Enter an IP address to use as the default gateway.

**DHCP Server Options tab > WINS**

Select one of these options:

- **Use the WINS servers configured for the internet connection**
- **Use the following WINS servers** - Enter the IP addresses of the **First** and **Second** WINS servers.

**DHCP Server Options tab > Lease**

- **Lease time** - Configure the timeout in hours for a single device to retain a dynamically acquired IP address.

**DHCP Server Options tab > Other Settings**

You can optionally configure these additional parameters so they will be distributed to DHCP clients:

- **Time servers**
- **Call manager**
- **TFTP server**
- **TFTP boot file**
- **X-Windows display manager**
- **Avaya IP phone**
- **Nortel IP phone**
- **Thomson IP phone**

**DHCP Server Options tab > Custom Options**

Lets you add custom options that are not listed above. For each custom option, you must configure the name, tag, type, and data fields.
**Configuring the Local Network**

The Device > Local Network page lets you set and enable the local network connections, switches, bridge or wireless network (on wireless devices only).

The Network table shows all available network connections.

The page also lets you:

- Configure multiple **switches** (port based VLANs) between the available local LAN interfaces and wireless networks. Between the LAN ports of a switch, traffic is neither monitored nor inspected.
- Configure multiple **bridges** between interfaces. Traffic in a bridge is always monitored and inspected by the appliance.
- Create and configure tag based **VLANs** (802.1q) on any of the LAN interfaces or DMZ.
- Create and configure **VPN tunnels (VTI)** which can be used to create routing rules which determine which traffic will be routed through the tunnel and therefore also encrypted (Route based VPN).
- On wireless devices - Add new **wireless networks (Virtual Access Points)**. This can also be done through the Device > Wireless Network page.

**To create any of the above options:**

Click **New** and choose the option you want.

**To edit/delete/enable/disable any of the above options:**

Select the relevant row and click **Edit/Delete/Enable/Disable**.

Note the following:

- Physical interfaces cannot be deleted.
- Editing an interface that is part of a switch or a bridge, lets you remove it from the switch or bridge.
- When a LAN or DMZ interface is part of an Internet connection, it will still be visible on this page, but can only be configured through the Device > Internet page.
- For each network, the table on this page shows you:
  - **Name** - Name of the network and interfaces that participate (if there are multiple interfaces)
  - **IP Address**
  - **Subnet Mask**
  - **Status** - Shows a status for physical interfaces and wireless networks:
    - Physical interfaces - Shows cable connection status of each physical interface that is enabled. Otherwise, it will show disabled.
    - Wireless networks - Shows if the wireless network is up or disabled.

**To create/edit a switch:**

Note: Between the LAN ports of a switch, traffic is neither monitored nor inspected.

Configure the fields in the tabs:

*Configuration tab*

1. In **Switch Configuration**, select or clear the interfaces you want to be part of the switch. The table shows you which interfaces are already part of the switch (shown with checkmarks in the table) and which interfaces are not assigned yet and can be added to the switch (empty checkboxes in the table). For example, if LAN8 is already part of another switch, it will not be shown at all in this table.
2. From **Assigned to**, select an option:
   - **Unassigned** - The switch is not part of any network and cannot be used
   - **Separate network** - When selecting a separate network, configure the settings for the switch
3. Choose the **IP address** and **Subnet mask** the switch uses.
4. **Use Hotspot** - Select this checkbox to redirect users to the Hotspot portal before allowing access from this interface. Hotspot configuration is defined in the Device > Hotspot page.
5. In **DHCP Server**:
   - Select one of the options:
Appliance Configuration

- **Enabled** - Enter the IP address range and if necessary the IP address exclude range. The appliance's own IP address is automatically excluded from this range. You can also exclude or reserve specific IP addresses by defining network objects in the Users & Objects > Network Objects page. Reserving specific IP addresses requires the MAC address of the device.

- **Relay** - Enter the DHCP server IP address.

- **Disabled**

**DHCP Server Options tab**

See DHCP Server Options tab below

**To edit a physical interface:**

Configure the fields in the tabs. Note that for the DMZ there is an additional tab **Access Policy**:

**Configuration tab**

- **Assigned to** - Select the required option:
  - **Unassigned** - The physical interface is not part of any network and cannot be used.
  - One of the existing configured switches or bridges
  - **Separate network** - When selecting a separate network configure this information:
    - IP address
    - Subnet mask
    - DHCP Server settings

Select one of the options:

- **Enabled** - Enter the IP address range and if necessary the IP address exclude range. The appliance's own IP address is automatically excluded from this range. You can also exclude or reserve specific IP addresses by defining network objects in the Users & Objects > Network Objects page. Reserving specific IP addresses requires the MAC address of the device.

- **Relay** - Enter the DHCP server IP address.

- **Disabled**

- **Note** - When creating a switch, the first interface within it cannot be removed from the switch unless the switch is deleted.

**Advanced tab**

The options that are shown vary according to interface type and status. Configure the options that are applicable:

- **MTU size** - Configure the Maximum Transmission Unit size for an interface. Note that in the Check Point 1100 Appliance, the value is global for all physical LAN and DMZ ports.

- **Disable auto negotiation** - Choose this option to manually configure the link speed of the interface.

**Access Policy tab (only for DMZ)**

These options create automatic rules that are shown in the Access Policy > Firewall Policy page.

- **Allow access from this network to local networks**

- **Log traffic from this network to local networks**

**DHCP Server Options tab**

See DHCP Server Options tab below

**To create/edit a tag based VLAN:**

You can create a new VLAN only if you have at least one physical interface that is not part of an existing network (switch or bridge).

Configure the fields in the tabs:

**Configuration tab**

- **VLAN ID** - Enter a number that is the virtual identifier.

- **Assigned to** - Select the physical interface where the new virtual network will be created.
Appliance Configuration

- **IP address**
- **Subnet mask**
- **Use Hotspot** - Select this checkbox to redirect users to the Hotspot portal before allowing access from this interface. Hotspot configuration is defined in the Device > Hotspot page.

**DHCP Server settings**
Select one of the options:
- **Enabled** - Enter the IP address range and if necessary the IP address exclude range. The appliance's own IP address is automatically excluded from this range. You can also exclude or reserve specific IP addresses by defining network objects in the Users & Objects > Network Objects page. Reserving specific IP addresses requires the MAC address of the device.
- **Relay** - Enter the DHCP server IP address.
- **Disabled**

**DHCP Server Options tab**
See DHCP Server Options tab below

**To create/edit a VPN Tunnel (VTI):**
A Virtual Tunnel Interface (VTI) is a virtual interface on a Security Gateway that is related to an existing, Route Based VPN tunnel. The Route Based VPN tunnel works as a point-to-point connection between two peer Security Gateways in a VPN community. Each peer Security Gateway has one VTI that connects to the tunnel.

The VPN tunnel and its properties are defined by the VPN community that contains the two gateways. You must define the VPN community and its member Security Gateways before you can create a VTI.

Configure the fields in the tab:

**Configuration tab**
- **VPN Tunnel ID** - A number identifying the VTI.
- **Peer** - The name of the VPN site. See Configuring VPN Sites.
- **Local IP address** - The IP address to be used for the local point-to-point virtual interface.
- **Remote IP address** - The IP address to be used at the peer gateway's point-to-point virtual interface.

**To create/edit a bridge:**
Configure the fields in the tabs:

**Configuration tab**
- In **Bridge Configuration**, select the networks you want to be part of the bridge.
- **Enable Spanning Tree Protocol** - When Spanning Tree Protocol (STP - IEEE 802.1d) is enabled, each bridge communicates with its neighboring bridges or switches to discover how they are interconnected. This information is then used to eliminate loops, while providing optimal routing of packets. STP also uses this information to provide fault tolerance, by re-computing the topology in the event that a bridge or a network link fails.
- Enter a **Name** for the bridge interface. Note that you can only enter "brN" where N is a number between 0 and 9. For example, br2.
- Choose the **IP address** and **Subnet mask** the switch uses.
- **Use Hotspot** - Select this checkbox to redirect users to the Hotspot portal before allowing access from this interface. Hotspot configuration is defined in the Device > Hotspot page.

**DHCP Server**
Select one of the options:
- **Enabled** - Enter the IP address range and if necessary the IP address exclude range. The appliance's own IP address is automatically excluded from this range. You can also exclude or reserve specific IP addresses by defining network objects in the Users & Objects > Network Objects page. Reserving specific IP addresses requires the MAC address of the device.
- **Relay** - Enter the DHCP server IP address.
• Disabled

Advanced tab

• **MTU size** - Configure the Maximum Transmission Unit size for an interface

**DHCP Server Options tab**

See DHCP Server Options tab below

**To create/edit a Virtual Access Point (VAP):**

See the Device > Wireless Network help page.

**DHCP Server Options tab**

The values for the DHCP options configured on this tab will be distributed by the DHCP server to the DHCP clients.

This tab is only available when the wireless network is a separate network and a DHCP server is configured on it.

**DHCP Server Options tab > DNS Server**

Select one of these options:

• **Auto** - This uses the DNS configuration of the appliance as configured in the Device > DNS and Device > Internet pages.

• **Use the following IP addresses** - Enter the IP addresses for the First DNS server, Second DNS server, and Third DNS server.

**DHCP Server Options tab > Default Gateway**

Select one of these options:

• **Use this gateway's IP address as the default gateway**

• **Use the following IP address** - Enter an IP address to use as the default gateway.

**DHCP Server Options tab > WINS**

Select one of these options:

• **Use the WINS servers configured for the internet connection**

• **Use the following WINS servers** - Enter the IP addresses of the First and Second WINS servers.

**DHCP Server Options tab > Lease**

• **Lease time** - Configure the timeout in hours for a single device to retain a dynamically acquired IP address.

**DHCP Server Options tab > Other Settings**

You can optionally configure these additional parameters so they will be distributed to DHCP clients:

• **Time servers**

• **Call manager**

• **TFTP server**

• **TFTP boot file**

• **X-Windows display manager**

• **Avaya IP phone**

• **Nortel IP phone**

• **Thomson IP phone**

**DHCP Server Options tab > Custom Options**
Lets you add custom options that are not listed above. For each custom option, you must configure the name, tag, type, and data fields.

Configuring a Hotspot

In the Device > Hotspot page you can configure:

- Guest access - A session is created for an IP address when a user accepts terms or authenticates in the Hotspot portal. The session expires after the configured timeout (240 minutes by default).
- Hotspot portal - Customize the portal's appearance.
- Hotspot exceptions - Define specified IP addresses, IP ranges or networks to exclude from the hotspot.

In the Access section of the page, you can configure if authentication is required and allow access to all users or to a specific user group (Active Directory, RADIUS or local).

Hotspot is automatically activated in the system. To turn it off, go to Device > Advanced Settings. Search for hotspot, double-click the entry, select Disabled and click Apply.

To configure Hotspot for an interface:
1. Click Configure in Local Network.
   The Local Network window opens.
2. Select interface and click Edit.
   The Edit <interface> window opens.
3. Select Use Hotspot.
4. Click Apply.

Any user that browses from configured interfaces will be redirected to the Check Point Hotspot portal.

To configure Hotspot exceptions:
1. Click Manage Exceptions.
   The Manage Hotspot Network Objects Exceptions window opens.
2. Select the objects to add as exceptions.
   The Selected Network Objects window shows the selected objects. To remove an object from the list, click the x next to it.
3. To filter the object list, enter the filter value. The list shows the objects that match the filter.
4. If necessary, click **New** to add new objects to the list. For information on creating a new object, see the Users & Objects > Network Objects page.
5. Click **Apply**.
   The added objects are excluded from the Hotspot.

**To require user authentication:**
1. Select the **Require Authentication** checkbox.
2. You can either allow access to **All users** or to a **Specific user group**.
3. If you selected Specific user group, enter the group's name in the text box.
4. Click **Apply**.
   Any user/user group that browse from configured interfaces will be redirected to the Check Point Hotspot portal and will have to enter authentication credentials.

**To configure the session timeout:**
1. In **Session timeout**, enter the number of minutes that defines how long a user stays logged in to the session before it is ends.
2. Click **Apply**.

**To customize the portal appearance:**
1. Click **Customize Hotspot portal**.
2. Configure the fields:
   - **Portal title** - Keep the default or enter a different title.
   - **Portal message** - Keep the default or enter a different message.
   - **Terms of use** - Select this checkbox to add an "I agree with the following terms and conditions" checkbox on the Hotspot portal page. Enter the terms and conditions text in the text box. When users will click the "terms and conditions" link, this text will be shown.
3. To customize a logo for all portals shown by the appliance (Hotspot and captive portal used by User Awareness), click **Upload**, browse to the logo file and click **Apply**. If necessary, you can revert to the default logo by clicking **Use Default**.
4. Click **Apply**.

**Configuring the Routing Table**

The Device > Routing page shows a routing table with the routes that have been added on your appliance. You can add new routes from here.

Default routes are not configured on this page. They are configured on the Device > Internet page, but can be viewed here. This page shows all the routing rules: manually configured on this page and defined automatically by the system. System defined routes cannot be edited.

You can create custom/new destination-based rules and policy-based routing rules, by source and by service.

**To add a new route:**
1. Click **New**.
   The New Routing Rule window opens.
2. Click the links in the rule summary, or in the table cells, to select values for the routing rules. See the descriptions below. Note that for Service you can also create a new service or service group.
3. **Optional**: Enter a comment.
4. Enter a metric between 0 and 100. The default is 0.
5. Click **Apply**.

<table>
<thead>
<tr>
<th>Table Columns</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination</td>
<td>The route rule applies only to traffic whose destination matches the destination IP address/network.</td>
</tr>
</tbody>
</table>
Table Columns | Description
--- | ---
Source | The route rule applies only to traffic whose source matches the source IP address/network.
Service | The route rule applies only to traffic whose service matches the service IP protocol and ports or service group.
Next Hop | The next hop gateway for this route.
| There are two available options: specific IP address of the next hop gateway or a specified Internet connection from the connections configured in the appliance.
Metric | Determines the priority of the route. If multiple routes to the same destination exist, the route with the lowest metric is chosen.

The edit, delete, enable, and disable options only available for manually defined routing rules created on this page. You cannot edit, delete, enable, and disable routing rules created by the OS for directly attached networks or rules defined by the dynamic routing protocol.

**To edit an existing route:**
Select the route and click **Edit**.

**To delete an existing route:**
Select the route and click **Delete**.

**To enable/disable an existing route:**
Select the route and click **Enable** or **Disable**.

**Important Notes**
- You cannot add a default route from this page. The default route of the system is inherited from Internet connection settings. To change the default route, edit an Internet connection. Then, set its **default gateway** (next hop) to a different IP address.
- For Internet Connection High Availability, the default route changes automatically on failover (according to the active Internet connection).
- When a network interface is disabled, all routes leading to this interface become "inactive". In such cases, the system routes traffic according to active routing rules (typically, to the default route). The route shows **inactive** in the routing page. It becomes active automatically when the interface is enabled.

When no default route is active (for example, when there is no Internet connection) this message shows:

**Note:** No default route is configured. Internet connections might be down or not configured.

**Configuring the DNS Server**
In the Device > DNS page you can configure the DNS server configuration and define the domain name.

**To configure DNS:**
1. Choose whether to define up to three DNS servers which will be applied to all Internet connections or use the DNS configuration provided by the active Internet connection (Primary).
   If you select **Configure DNS servers**, make sure that you enter valid IP addresses.
   Use the first option if your DNS servers are located in the headquarters office. In this case, all DNS requests from this branch office will be directed to these DNS servers.
   The second option allows a more dynamic definition of DNS servers. The gateway will use the DNS settings of the currently-active Internet connection (in case of static IP – the DNS manually provided under "Internet connection"-> Edit, in case of DHCP / Dialers – the DNS automatically provided by the ISP). If Internet Connection High Availability is enabled, the DNS servers will switch automatically upon failover.
2. By default, the Check Point 1100 Appliance functions as your DNS proxy and provides DNS resolving services to internal hosts behind it (network objects). This option is global and applies to all internal networks.
You can choose to get IP addresses directly from the DNS server(s) defined above, by clearing the Enable DNS Proxy checkbox.

When DNS proxy is enabled, Resolve Network Objects controls whether or not the DNS proxy will treat the local network objects as a hosts list. When selected the local DNS servers will resolve network object names to their IP addresses for internal network clients.

3. Enter a Domain Name. There are two separate uses of the domain name:
   - Local hosts (the Security Gateway and network objects) are optionally appended with the domain name when DNS resolving is performed.
   - DNS queries that do not contain a domain name are automatically appended with the domain name.
   Note these syntax guidelines:
   - The domain name must start and end with an alphanumeric character.
   - The domain name can contain periods, hyphens, and alphanumeric characters.

4. Click Apply.

**Configuring the Proxy Server**

The Device > Proxy page, requires configuration when there is a proxy server between the appliance and the Internet. This proxy server will be used when the appliance’s internal processes must reach a Check Point server. For example, to get updates from update and license servers or to reach the URL Filtering services.

This is not a common deployment as you usually deploy the proxy server for your organization in the internal networks.

**To configure a proxy server:**
1. Select Use a proxy server.
2. Enter a Host name or IP address.
3. Enter a Port.
4. Click Apply.

**Backup, Restore, Upgrade, and Other System Operations**

In the Device > System Operations page you can:

- Reboot
- Restore factory default settings
- Revert to the factory default image and settings
- Automatically or manually upgrade the appliance firmware to the latest Check Point version
- Revert to earlier firmware image
- Backup appliance settings to a file stored on your desktop computer
- Restore a backed up configuration

**To reboot the appliance:**
- Click Reboot and then click OK in the confirmation message. The appliance will reboot.

**To restore factory default settings:**
- Click Default Settings and then click OK in the confirmation message. The factory default settings will be restored. The appliance will reboot itself to complete the operation.
  
  Note - This does not change the software image. Only the settings will be restored to their default values (IP address 192.168.1.1:4434, the username: admin and password: admin).

**To revert to the factory default image:**
- Click Factory Defaults and then click OK in the confirmation message. The factory default settings will be restored. The appliance will reboot itself to complete the operation.
Note - This restores the default software image which the appliance came with and also the default settings (IP address 192.168.1.1:4434, the username: admin and password: admin).

To make sure you have the latest firmware version:

Click Check now.

To automatically upgrade your appliance firmware when Cloud Services is not configured:

1. Click Configure automatic upgrades.
   The Automatic Firmware Upgrades window opens.
2. Click Perform firmware upgrades automatically.
3. Select the upgrade option to use when new firmware is detected:
   • Upgrade immediately
   Or
   • Upgrade according to this frequency - Select one of the Occurs options:
     ▪ Daily - Select the Time of day.
     ▪ Weekly - Select the Day of week and Time of day.
     ▪ Monthly - Select the Day of month and Time of day.
4. Click Apply.

Note - When a new firmware upgrade is available, a note shows the version number and lets you upgrade it immediately by clicking Upgrade Now or you can click More Information to see what is new in the firmware version.

Note - If the gateway is configured by Cloud Services, automatic firmware upgrades are locked. They can only be set by Cloud Services.

To manually upgrade your appliance firmware:

2. Follow the Wizard instructions.

   Note - The firewall remains active while the upgrade is in process. Traffic disruption can only be caused by:
   • Saving a local image before the upgrade (this causes the Firewall daemon to shut down). This may lead to disruption in VPN connections.
   • The upgrade process automatically reboots the appliance.

To revert to an earlier firmware image:

1. Click Revert to Previous Image.
2. Click OK in the confirmation message.
   The appliance reboots to complete the operation.

To backup appliance settings:

1. Click Backup. The Backup Settings page opens.
2. To encrypt the backup file, select the Use File Encryption checkbox. Set and confirm a password.
3. To back up the security policy installed on the appliance, select the Backup Security Policy checkbox. You can add Comments about the specific backup file created.
4. Click Save Backup. The File Download dialog box appears. The file name format is <current software version>-<YY-Month-day>-<HH_MM_Seconds>.zip
5. Click Save and select a location.

To restore a backed up configuration:

1. Click Restore. The Restore Settings page appears.
2. Browse to the location of the backed up file.
3. Click Upload File.
Important Notes

- To replace an existing appliance with another one (for example, upon hardware failure) you can restore the settings saved on your previous appliance and reactivate your license (through Device > License).
- To duplicate an existing appliance you can restore the settings of the original appliance on the new one.
- Restoring settings of a different version is supported, but not automatically between every two versions. If the restore action is not supported between two versions, the gateway will not allow restoring the settings.

Using the Software Upgrade Wizard

Follow the instructions in each page of the Software Upgrade Wizard.
During the wizard click Cancel to quit the wizard.

Welcome

Click the Check Point Download Center link to download an upgrade package as directed. If you already downloaded the file, you can skip this step.

Upload Software

Click Browse to select the upgrade package file.
Click Upload. This may take a few minutes. Once the upload is complete, the wizard automatically validates the image. A progress indicator at the bottom of the page informs you the percentage completed. Upon successful image validation, an "Upload Finished" status appears.

Upgrade Settings

The system always performs an upgrade on a separate flash partition and your current-running partition is not affected. Consequently, you can always switch back to the current image in case of an immediate failure in the upgrade process. In the unexpected event that the appliance does not come up properly from the boot, disconnect the power cable and reconnect it. The appliance will automatically revert to the previous image.

You will be able to return to a previous image by clicking the Revert to Previous Image button on the System Operations page. The backup contains the entire image, including the firmware, all system settings and the current security policy.

When you click Next, the upgrade process starts.

Upgrading

The Upgrading page shows an upgrade progress indicator and checks off each step as it is completed.
- Initializing upgrade process
- Installing new image

Backing Up the System

In the Device > System Operations > Backup Settings page do these steps:

1. To encrypt the backup file, select the Use File Encryption checkbox. Set and confirm a password.
   The backup file includes all your system settings such as network settings and DNS configuration. The backup file also contains the Secure Internal Communication certificate and your license.
2. You can add Comments about the specific backup file created.
   By default, system settings are always backed up.
3. Click Create Backup.
4. Click Download Backup to save the backup file. The File Download dialog box appears. The file name format is <current software version>-<YY-Month-day>-<HH_MM_Seconds>.zip
5. Click Save and select a location.
**Important Notes**

If you wish to replace an existing appliance with another one (for example, upon hardware failure) you can simply restore the settings saved on your previous appliance and re-activate your license (through License Page > Activate License).

If you wish to duplicate an existing appliance you can restore the settings of the original appliance on the new one. Make sure to change the IP address of the duplicated appliance (Device > Internet page) and generate a new license.

**Configuring Local System Administrators**

The Device > Administrators page lists the Check Point 1100 Appliance administrators and lets you create new local administrators, configure the session timeout, and limit login failure attempts. Administrators can also be defined in a remote RADIUS server and you can configure the appliance to allow them access. Authentication of those remotely defined administrators is done by the same RADIUS server.

You can create administrators with read-only privileges. Read-only administrators cannot update appliance configuration, but some other operations are still available to them. For example, they can create new read-only users or run a traffic monitoring report from the Tools page.

**To create a Check Point 1100 Appliance local administrator:**
1. Click New. The Add administrator page appears.
2. Configure the parameters in the page that opens (name, password, and password confirmation). The hyphen (-) character is allowed in the administrator name. You cannot use these characters when you enter a password or shared secret: { } [ ] ` ~ | ' "
3. To set the administrator with read-only privileges, select Read-only Administrator.
4. Click Apply.

The name and permission information of the administrator is added to the table. When logging in to the WebUI, the administrator name and an icon that represents read or read/write permissions is shown at the top of the page.

**To edit the details of locally defined administrators:**
1. Select the administrator from the table and click Edit.
2. Make the relevant changes.
3. Click Apply.

**To delete a locally defined administrator:**
1. Select an administrator from the list.
2. Click Delete.
3. Click Yes in the confirmation message.

Note that you cannot delete the administrator that is currently logged in.

**To allow access for administrators defined in a remote RADIUS server:**
1. Make sure administrators are defined in the remote RADIUS server.
2. Make sure a RADIUS server is defined on the appliance. If there is no server, click the RADIUS configuration link at the top of this page. You will be asked to configure the IP address and shared secret used by the RADIUS server.
3. Click edit permissions once you have a configured RADIUS server.
4. Click the Enable RADIUS authentication for administrators checkbox.
5. Select which user group defined in the RADIUS server will be granted administrator permissions:
   a) Select All users defined on RADIUS server (not recommended) or Specific RADIUS groups only and enter the RADIUS groups separated by a comma.
   b) To enable RADIUS authentication for read-only administrators, select the Read-only Administrators checkbox.
6. Click Apply.

**To set the Session Timeout value for both local and remotely defined administrators:**
1. Click Session Timeout.
2. Configure the session timeout in the page that opens (maximum time period of inactivity in minutes). The maximum value is 999 minutes.

3. Click **Apply**.

**To limit login failure attempts for both local and remotely defined administrators:**
1. Click **Session Timeout**.
2. Select **Limit administrators login failure attempts**.
3. Enter the number of **Maximum consecutive login attempts** allowed before a user is locked out.
4. In **Lock period**, enter the time (in seconds) that must pass before a locked out administrator can attempt to log in again.
5. Click **Apply**.

**Note** - This page is available from the Device and Users & Objects tabs.

---

### Configuring Administrator Access

The Device > Administrator Access page lets you configure the IP addresses and interface sources that administrators can use to access the Check Point 1100 Appliance. You can also configure the Web and SSH ports.

First set the interface sources from which allowed IP addresses can access the appliance.

**To set the interface sources from which administrator access is allowed:**

Select one or more of the options:

- **LAN** - All internal physical ports
- **Trusted wireless** - Wireless networks that are allowed access to the LAN by default (only in Wireless Network and Wireless Network + ADSL models)
- **VPN** - Using encrypted traffic through VPN tunnels from a remote site or using a remote access client
- **Internet** - Clear traffic from the Internet (not recommended to allow access from all IP addresses)

**To allow administrator access from any IP address:**
1. Select the **Any IP address** option. This option is less secure and not recommended. It is recommended to allow access from the Internet to specific IP addresses only.
2. Change the **WEB Port (HTTPS)** and/or **SSH port** if necessary.
3. Click **Apply**. An administrator will be able to access Check Point 1100 Appliance using any IP address through the allowed interface sources.

**To allow administrator access from specified IP addresses:**
1. Select the **Specified IP addresses only** option.
2. Click **Add**. The Access Policy IP Address Configuration page appears.
3. Define the IPv4 address as either:
   - **Specific IP address** - manually enter the IP address or click **Get IP from My Computer**.
   - **Specific Network** - manually enter the **Network Address** and **Subnet Mask**.
4. Click **Apply**. The IP address is added to the table.s
5. Change the **WEB Port (HTTPS)** and/or **SSH port** if necessary.
6. Click **Apply**. An administrator will be able to access Check Point 1100 Appliance using the configured IP addresses through the allowed interface sources.
To allow administrator access from the Internet for specified IP addresses and from any IP address for other sources:

Select this option when it is necessary to allow administrator access from the Internet (you must define the specific IP addresses). Access from other sources is allowed from any IP address.

1. Select the Internet source checkbox.
2. Select the Specified IP addresses from the internet and any IP address from other sources option.
4. Define the IPv4 address as either:
   - Specific IP address - manually enter the IP address or click Get IP from My Computer.
   - Specific Network - manually enter the Network Address and Subnet Mask.
5. Click Apply. The IP address is added to the table.
6. Change the WEB Port (HTTPS) and/or SSH port if necessary.
7. Click Apply. An administrator will be able to access Check Point 1100 Appliance using the configured IP addresses through the allowed interface sources.

To delete administrator access from a specific IP address:
1. Select the IPv4 Address you want to delete from the IPv4 Address table.
2. Click Delete.

Important Notes:
- Configuring different access permissions for LAN and Internet is not supported when your Internet Connection is configured in bridge mode (the option Allow administration access from does not show Internet or LAN).
- An automatic implied rule is defined to allow the access specified here. There is no need to add an explicit rule in the Access Policy page to allow this access.
- For your convenience, when you block the IP address or the interface group through which you are currently connected, you will not be disconnected immediately. The access policy is applied immediately, but your current session remains active until you log out.

Managing Licenses

The Home > License page shows the license state for the software blades. From this page, the appliance can connect to the Check Point User Center with its credentials to pull the license information and activate the appliance.

In most cases, you must first register the appliance in your Check Point User Center account or create one if you don’t already have one. A User Center account is necessary to receive support and updates for service blades such as IPS and Anti-Virus.

If you have Internet connectivity configured:
1. Click the Activate License link on this page to be directed to the registration form in the User Center.
2. If registration information is not successfully retrieved, browse to the applicable URL:
   - For 1100 Appliances: http://register.checkpoint.com
   - For 600 Appliances: http://smbregistration.checkpoint.com
3. Complete the applicable fields in the User Center registration.
   - Appliance MAC address
   - Appliance registration key
   - From Hardware Platform, select 2012 Models
   - From Hardware Model, select 1100 Appliance
4. Return to this page and click Activate License.

You will be notified that you successfully activated the appliance. After initial activation, the Activate License button shows Reactivate. If changes are made to your license, click Reactivate to get the updated license information.
If you are working offline while configuring the appliance:
1. Browse to https://usercenter.checkpoint.com and fill out the requested information. You will have to enter the appliance's credentials, MAC address and registration key, that can be found on the Home > License page.
2. After you complete the registration wizard, you will be prompted to download the activation file. Download it to a local location. This is needed for the next step.
3. In the Home > License page, click Offline. The Import Activation File window opens.
4. Browse to the activation file you downloaded and click Import. The activation process starts.

If there is a proxy between your appliance and the Internet, you must configure the proxy details before you can activate your license:
1. Click Set proxy.
2. Select Use proxy server and enter the proxy server Address and Port.
3. Click Apply.
4. Click Activate License.

Managing Device Details
In the Device > Device Details page, you can enter a name for the appliance.
- Enter an Appliance Name to identify the Check Point 1100 Appliance.
  - The Appliance Name can only contain alphanumeric characters and the hyphen character.
  - The hyphen character should not be used as the first or last character.
- In wireless devices only - You can also configure the Country on this page. The allowed wireless radio settings vary according to the standards in each country.

Configuring DDNS Account Details
In the Device > DDNS page, you can configure DDNS account details in one of the supported providers. The appliance will update the provider with its IP addresses and users will be able to connect to the device using a host name given by the provider instead of IP addresses.

This is especially important for remote access users who need to connect to the device to be able to then connect to the internal network through VPN.

Select Connect to the appliance by name from the Internet (DDNS) to enable this service.

Enter the details of your account on the page:
- Provider - Select the DDNS provider that you have already set up an account with.
- User name - Enter the user name of the account.
- Password - Enter the password of the account. You cannot use these characters when you enter a password or shared secret: `{ } [ ] ` ~ | ' "
- Domain name - Enter the domain name (sometimes called host name) within your account that the device will use.

For more information about these details, refer to your provider's website.

Managing Date and Time Settings
The Device > Date and Time page shows the current system time and lets you define the Check Point 1100 Appliance date and time, optionally using NTP.

To manually configure date and time:
1. Select the Set Date and Time Manually option.
2. Enter the current Date and Time. Click the calendar icon to enter the date. Specify whether the time is AM or PM.
3. Click Apply.
To use Network Time Protocol (NTP) to synchronize the clocks of computers on the network:
1. Select the Set Date and Time Using a Network Time Protocol (NTP) Server option.
2. Enter the Host name or IP addresses of the Primary NTP Server and Secondary NTP Server. If the Primary NTP Server fails to respond, the Secondary NTP Server will be queried.
3. Set the Update Interval (minutes) field.
4. Select the NTP Authentication checkbox if you want to supply a Shared Secret and a Shared Secret Identifier (this is optional). You cannot use these characters when you enter a password or shared secret: { } [ ] ` ~ | ' "
5. Click Apply.

Time Zone
1. From the Local Time Zone list, select the correct time zone option.
2. Select the Automatically adjust clock for daylight saving changes checkbox to enable automatic daylight saving changes.
3. Click Apply.

Configuring Advanced Settings
The Device > Advanced Settings page is for advanced administrators or Check Point support. You can configure values for multiple advanced settings for the various blades.

Important - Changing these advanced settings without fully understanding them can be harmful to the stability, security, and performance of this appliance. Continue only if you are certain that you understand the required changes.

For details regarding the attributes, consult with Check Point support.

To filter the list of attributes:
1. Enter text in the Type to filter field.
   The search results are dynamically shown as you type.
2. To cancel the filter, click X next to the search string.

To configure the appliance attributes:
1. Select an attribute.
2. Click Edit.
   The attribute window opens.
3. Configure the settings, or click Restore Defaults to reset the attribute to the default settings.
4. Click Apply.
   The appliance attribute is configured.

To reset all the appliance attributes to the default settings:
1. From the Advanced Settings window, click Restore Defaults.
   The Confirm window opens.
2. Click Yes.
   All appliance attributes are reset to the default settings.

Using System Tools
See Using System Tools (on page 26).

Configuring High Availability
In the Device > High Availability page you can create a cluster of two Check Point 1100 Appliances for high availability.
**Note** - You cannot create a cluster when you have a switch or bridge defined in your network settings on the appliance. If necessary, change network settings in the Device > Local Network page.

After you define a cluster, you can select to **Enable** or **Disable** the cluster.

The page shows the configured interfaces for monitoring or high availability enabled in a table, where you can edit them.

If you change configuration details of the cluster members, click **Reinitialize Trust** to reestablish trust between the members.

**Reset Cluster Configuration** - Deletes all configuration settings. You will have to run the wizard again to configure the cluster.

**Force Member Down** - Use this option when it is necessary to failover to the other member. For example, when you want to test the functionality of the other member.

For troubleshooting, you can click the **diagnostics** button to see detailed information about the status of the cluster.

**To create a cluster:**

1. Click **Configure Cluster**.
   
   The New Cluster Wizard opens.

2. In Step 1: Gateway Priority, select one of the options:
   
   - **Configure as primary member** - If this appliance must be configured first.
   
   - **Configure as secondary member** - If a primary member has already been configured and this appliance will connect to it.

3. Click **Next**.

4. For a primary member:
   
   a) In Step 2: SIC Settings, enter a **password** and **confirm** it. This password is used for establishing trust between the members. You cannot use these characters when you enter a password or shared secret: { } [ ] ` ~ | ' "

   b) The default Sync interface is LAN2. If it is necessary to change it, click **Advanced** and select a different **Sync Interface**. You can also change the predefined **Sync IP Address** and **Sync IP Subnet**.

   Note - Make sure that changes you make here are also made on the other cluster member.

   c) Click **Next**.

   d) In Step 3: Gateway Interfaces (1 out of N), you can define the cluster IP on the related interfaces. Enter the necessary details.

   By default, the appliance monitors the interface condition if the interface is enabled for high availability. If there is a failure, it automatically fails over to the secondary cluster member. When the interface is not enabled for high availability, you can select it will be used for monitoring.

   e) Click **Next**. Do step d. again for all related interfaces in your network.

   - **Note** - For Internet connections, you can only enable high availability on Static IP Internet connections. Other types of Internet connections can be used for monitoring only.

5. For a secondary member:
   
   a) In Step 2: SIC Settings, enter the Secure Internal Communication **password**.

   b) Click **Establish Trust**.

6. Click **Finish**.

   When the cluster is successfully configured, you will see the status of the members on this page.

After the cluster is configured, when you connect to the cluster IP address you are automatically redirected to the active cluster member. To log in to specified member, you must log in with the member’s IP address.
Note that the WebUI of the secondary member (standby member) only has some options available for fine tuning. This is because all cluster management is done from the active member.

Managing SNMP

In the Logs & Monitoring > SNMP page you can configure SNMP settings for this gateway.

You can do these actions:

- Turn the SNMP agent on or off
- Configure SNMP settings (system location, system contact, and community string for SNMP v1 and v2 authentication)
- Add SNMP v3 users
- Configure the settings for SNMP Trap receivers
- Enable or disable SNMP traps that are sent to the trap receivers

To turn SNMP on or off:

- Change the SNMP On/Off slider position to ON or OFF and click Apply. SNMP must be set to on to configure all SNMP settings (users, traps, and trap receivers).

To configure SNMP settings:

- Click Configure.
  The Configure SNMP General Settings window opens. You can enable SNMP traps, configure system location and contact details, and enable SNMP versions in addition to v3.

SNMP v3 Users

- To add a new SNMP v3 user, click New.
- To edit an existing SNMP v3 user, select the user from the list and click Edit.
- To delete an SNMP v3 user, select the user from the list and click Delete.

SNMP Traps Receivers

You can add, delete, or edit the properties of SNMP trap receivers.

- To add an SNMP trap receiver, click New.
Note: To add a new SNMP v3 trap receiver, there must be an SNMP v3 user defined for it.

- To edit an existing SNMP trap receiver, select the trap receiver from the list and click **Edit**.
- To delete an SNMP trap receiver, select the trap receiver from the list and click **Delete**.

**SNMP Traps**

You can enable or disable specified traps from the list and for some traps set a threshold value. The enabled traps are sent to the receivers.

**To edit an SNMP trap:**
1. Select the trap from the list and click **Edit**.
2. Select the **Enable trap** option to enable the trap or clear it to disable the trap.
3. If the trap contains a **value**, you can edit the threshold value when necessary.
4. Click **Apply**.

**Adding or Editing an SNMP v3 User**

In the Logs & Monitoring > SNMP > SNMP v3 Users page you can define or edit authentication and privacy settings for an SNMP v3 user. Authentication is based on MD5 or SHA algorithms and encryption (privacy) is based on DES or AES standard.

- **User name** - The SNMP v3 user name used for authentication. Note: The user name can only be defined when creating a new user.

- **Authentication**
  - **Protocol** - Select which authentication protocol to use for this user **MD5** or **SHA1**.
  - **Password** - Enter the password used to authenticate this user.

- **Privacy** - Select this checkbox to use a privacy protocol.
  - **Protocol** - Select the privacy protocol for this user **DES** or **AES**.
  - **Password** - Enter the encryption password for this user.

Note - You cannot use these characters when you enter a password or shared secret: { } [ ] ` ` ~ ` ` | ` ` "

After you enter all the information, click **Apply**. The information is shown in the SNMP v3 Users table on the main SNMP page.

**Managing SNMP Traps**

In the Device > SNMP Traps page, you can configure the settings for SNMP trap messages for specific events. For example, send an alert when a network interface is disconnected.

You can do these actions:

- Turn SNMP traps on or off
- Add or delete SNMP trap receivers
- Edit the properties of an SNMP trap receiver
- Enable or disable a specific SNMP trap
- Set the threshold value for SNMP traps

**Turn SNMP traps on or off**

- Change the SNMP traps On/Off slider to **On** or **Off** and click **Apply**.
  - Note: You must turn on the SNMP agent before you can turn on SNMP traps. The SNMP agent is turned on from the Device > SNMP page.

**Add SNMP trap receivers**

- In the SNMP Trap Receivers section, click **Add**.
- In the SNMP Trap Receiver Configuration window, configure the trap receiver settings and click **Apply**.
  - Note: To add a new SNMP v3 trap receiver, there must be an SNMP v3 user defined for it. Define SNMP v3 users in the Device > SNMP page.
Edit SNMP trap receiver settings
- From the SNMP Traps Receivers section, select the SNMP Trap receiver and click Edit.
- In the Trap Receiver Configuration window, configure the settings for the SNMP trap receiver and click Apply.

Delete a trap receiver
- From the SNMP Traps Receivers section, select the SNMP Trap receiver and click Delete.

Enable or disable SNMP traps
- From the SNMP Traps Configuration section, select an SNMP Trap and click Edit.
- In the SNMP Trap Configuration window, select or clear Enable trap for the following event and click Apply.

Set the threshold value for an SNMP trap
- From the SNMP Traps Configuration section, select an SNMP trap and click Edit.
- In the SNMP Trap Configuration window, enter the threshold value for the event and click Apply.

Management Server SNMP traps settings
- SNMP Traps settings can also be centrally managed using the Security Management Server of this gateway.
- To centrally manage SNMP traps settings, run the thresholds_config utility on the management server Command Line Interface (the SNMP settings are applied when installing the security policy on the gateway).

Note: If SNMP traps are enabled on this page, the gateway ignores SNMP traps settings that are sent from the Security Management Server.

Configuring SNMP Trap Receivers
In the Logs & Monitoring > SNMP > SNMP Receiver page you can define or edit SNMP Trap Receivers.
- IP Address - Enter IP address of the SNMP trap receiver.
- v2 Traps receiver - Select this option if the version of your SNMP trap receiver is v2.
  - Community String - Enter the SNMP v1/v2 community string.
- v3 Traps receiver - Select this option if the version of your SNMP trap receiver is v3.
  - SNMP v3 user - Select the SNMP v3 user name for this trap receiver.

After you enter all the information, click Apply. The information is shown in the SNMP Traps Receivers table on the main SNMP page.

Configuring SNMP Traps
In the Logs & Monitoring > SNMP > Configure page you can configure these settings.
- Enable SNMP traps - Select to enable traps or clear the checkbox to disable traps.
- System location - Enter a description of the physical location of this gateway.
- System contact - Enter the contact information for the administrator of this gateway.
- Enable SNMP v1/v2 (in addition to v3) - Select this option if SNMP versions v1 or v2 must be enabled on this SNMP agent of this gateway.
  - Define at least one SNMP v3 user for v3 only.
  - Community String - If v1 and v2 are enabled, enter the community string that the SNMP agent uses for authentication with management stations.

After you enter all the information, click Apply.
Managing the Access Policy

This section describes how to set up and manage your Check Point 1100 Appliance access policy.

Configuring the Firewall Access Policy and Blade

In the Access Policy > Firewall Blade Control page you can set the default Access Policy control level, set the default applications and URLs to block and allow secure browsing, and configure User Awareness.

The Access Policy is a set of rules that defines the security requirements for your Check Point 1100 Appliance in regards to incoming, internal, and outgoing traffic.

The Access Policy includes:

- **Firewall Policy** - Defines how to inspect packets.

- **Applications & URL Filtering** - Defines how to control Internet browsing and application usage.

The Access Policy > Firewall Blade Control page lets you easily define the default policy for your organization. In addition, you can define and view the rule based policy in the Access Policy > Firewall Policy page. Configurations in the Firewall Blade Control page will be shown as automatically generated system rules at the bottom of the Rule Base. It is recommended to use the Access Policy > Firewall Policy page to define manual rules that are exceptions to the default policy defined in this page.

The Access Policy > Firewall Blade Control page defines the default policy for incoming, internal, and outgoing traffic to and from your organization. In addition, the Access Policy > Firewall Servers page lets you easily define the default access policy for specific servers within your organization and automatically generated system rules are also defined.

Firewall Policy

Select one of these options to set the default Access Policy:

- **Strict**
  - Blocks all traffic, in all directions, by default. In this mode, your policy can only be defined through the Servers page and by manually defining access policy rules in the Access Policy > Firewall Policy page.

- **Standard**
  - Allows outgoing traffic to the Internet on configured services. You can click the **services** link to configure all or only specified services that are allowed.
  - Allows traffic between internal networks and trusted wireless networks (in applicable devices).
  - Blocks incoming unencrypted traffic from the Internet (traffic from outside your organization to it).

  The Standard policy option is the default level and is recommended for most cases. Keep it unless you have a specified need for a higher or lower security level.

- **Off**
  - Allows all traffic. When the firewall is deactivated, your network is not secured. Manually defined rules are not applied.

  **Note** - When the blade is managed by Cloud Services, a lock icon is shown. You cannot toggle between the on and off states. If you change other policy settings, the change is temporary. Any changes made locally will be overridden in the next synchronization between the gateway and Cloud Services.

To set specified outgoing services in a standard Firewall policy:

1. When the Access Policy control level is set to **Standard**, click the **all services** link.
2. Select **Block all outgoing services except the following**.
3. Select the checkboxes of the services to allow.
4. To allow all services, select **Allow all outgoing services**.
5. Click **Apply**.
To manually configure Access Policy rules:

Go to the Access Policy > Policy page.

In the Access Policy > Blade Control page:

- When no manual rules are configured, you can click the Firewall Policy link to add manual rules to the Firewall policy.
- When manual rules have been configured, it shows the number of rules that has been added. Click on the manual rules link to see them in the Access Policy.

You can also see how many servers are defined in the appliance by clicking the Servers link. If you have no servers configured, you can click the Add a server link to easily add one. A server object is a defined IP address to which you can also define a specific access policy and also incoming NAT rules if necessary. For example, Port forwarding NAT. Automatically generated access rules to servers are created above the default policy rules and can be seen in the Access Policy > Firewall Policy page. You can create exception rules for servers as well in the Access Policy > Firewall Policy page.

Applications & URL Filtering

The Applications & URL Filtering section lets you define how to handle applications and URL categories on traffic from your organization to the Internet.

Applications and URL Filtering are service based features and require Internet connectivity to download the latest signature package for new applications and to contact the Check Point cloud for URL categorization. This page lets you define the default policy for Applications & URL Filtering control. It is recommended by default to block browsing to security risk categories and applications. But you can also configure additional applications and categories to block by default according to your company's policy. In addition, you can also choose to limit bandwidth consuming applications for better bandwidth control.

The default policy defined here is viewed as automatically generated rules in the bottom of the Outgoing traffic Rule Base in the Access Policy > Policy page.

Select one or more of these options:

- **Block security risk categories** - Lets you block applications and URLs that can be a security risk and are categorized as spyware, phishing, botnet, spam, anonymizer, or hacking. This option is selected by default.
- **Block inappropriate content** - Lets you control content by blocking Internet access to websites with inappropriate content such as sex, violence, weapons, gambling, and alcohol.
- **Block Torrents and P2P applications** - Lets you block file-sharing from usually illegal sources using torrents and peer-to-peer applications.
- **Block other undesired applications** - Lets you manually add and block applications or categories of URLs to a group of undesired applications. You can also create a new URL or application if it is not in the database. Click this option to manage your basic Application & URL Filtering policy that sets what to block. For a more granular policy, go to the Access Policy > Firewall Blade Control page.
- **Limit bandwidth consuming applications** - Applications that use a lot of bandwidth can decrease performance necessary for important business applications. This option gives accelerated QoS (bandwidth control) for applications. When you select this option, P2P file sharing, media sharing, and media streams are selected by default but you can edit the group to add applications or categories that you think should have a limit with regards to the amount of bandwidth they consume. Note that it is very important to indicate the maximum bandwidth limit according to your Internet connection upload and download bandwidth. Consult your ISP for this information. For the limit to be effective, it has to be lower than the actual bandwidth supplied by your ISP. Upload and download bandwidths are usually not the same.

Updates

As a service based feature, this page also shows you the update status:

- Up to date
- Updated service unreachable - This usually results from a loss in Internet connectivity. You must check your Internet connection in the Device > Internet page and contact your ISP if the problem persists.
• Not up to date - A new update package is ready to be downloaded but the scheduled hour for updates has not occurred yet. Updates are usually scheduled for off-peak hours (weekends or nights).

**To schedule updates:**
1. Hover over the icon next to the update status and select the **Schedule Updates** link.
2. Choose the blades for which to schedule updates. You must manually update the rest of the blades when new updates packages are available and a not up to date message is shown in the status bar at the bottom of the WebUI application.
3. Select a **Recurrence** time frame:
   - **Daily** - Select the **Time of day**.
   - **Weekly** - Select the **Day of week** and **Time of day**.
   - **Monthly** - Select the **Day of month** and **Time of day**.
4. Click **Apply**.

**User Awareness**

User Awareness lets you configure the Check Point 1100 Appliance to enforce access control for individual users and groups and show user-based logs instead of IP address based logs.

Initially, click **Configure** to set up how User Awareness recognizes users. Once this is configured, you will be able to see users in logs and also configure user based Access Policy rules. User recognition can be done seamlessly by the appliance using your organization’s AD server. The user database and authentication are all done through the AD server. When a user logs in to the AD server, the appliance is notified. Users from the AD server can be used as the Source in Access Policy rules.

Alternatively or in addition, users can be defined locally in the Users & Objects > Users page with a password. For the appliance to recognize the traffic of those users, you must configure Browser-Based Authentication and the specific destinations to which they must be identified first before accessing. Normally, Browser-Based Authentication is not used for all traffic, but rather for specific destinations because it requires manual login by the end user through a dedicated portal.

If User Awareness has been configured, the **Enable User Awareness** checkbox is shown. To disable User Awareness, clear the checkbox. To make changes to the configuration, click **Edit settings**.

At any time, you can also click **Active Directory servers** to define an AD server that the gateway can work with. Creating an AD server is also available in the Edit settings wizard.

**Tracking**

You can log blocked and accepted traffic. By default, blocked traffic is logged. You can clear this setting if necessary. These settings apply to all traffic block or accepted by the default Firewall and Applications & URL Filtering policies.

**More Information**

The Check Point Application Database contains more than 4,500 applications and about 96 million categorized URLs.

Each application has a description, a category, additional categories, and a risk level. You can include applications and categories in your Application Control and URL Filtering rules. If your appliance is licensed for the Application Control & URL Filtering blades, the database is updated regularly with new applications, categories and social networking widgets. This lets you easily create and maintain an up to date policy.

You can see the Application Database from:

- The **Block other undesired applications** link.
- The **Applications & URLs** link - This opens the Users & Objects > Applications & URLs page.
The Check Point AppWiki link - The AppWiki is an easy to use tool that lets you search and filter the Application and URL Filtering Database.

Working with the Firewall Access Policy

In the Access Policy > Firewall Policy page you can manage the Firewall Access Policy Rule Base. You can create, edit, delete, enable or disable rules. In the Access Policy > Firewall Blade Control page you determine the basic firewall policy mode.

In Standard mode, this page shows you both automatically generated rules according to the configuration of your default policy and manually defined rules as exceptions to this default policy.

In Strict mode, all access is blocked by default and this page is the only way to configure access rules for your organization.

The Rule Base is divided into two sections. Each of the two sections represent a different security policy - how your organization browses to the Internet (the world outside your organization) and the security policy for accessing your organization's resources (both from within and from outside your organization). At the top of the page there are three links that let you see both or only one of the sections.

- **Outgoing access to the Internet** - For all outgoing traffic rules. In this Rule Base you determine the policy for accessing the Internet outside your organization. Commonly the policy here is to allow the basic traffic, but you can block applications and URLs according to your company's discretion. In the Access Policy > Firewall Blade Control page you can configure the default policy for blocking applications and URLs. This page lets you add manual rules as exceptions to the default policy. You can also customize messages that are shown to users for specified websites when they are blocked or accepted by the Rule Base (see below). You can also use an Ask action for applications or URLs that lets the end user determine whether browsing is for work related purposes or not. For example, it is recommended to add a rule that asks the users before browsing to uncategorized URLs. Such a rule can disrupt possible bot attacks.

- **Incoming, internal and VPN traffic** - For all incoming, internal and VPN traffic rules. In this Rule Base, you determine the policy for accessing your organization's resources. All internal networks, wireless networks, and external VPN sites are considered part of your organization and traffic to them is inspected in this Rule Base. Commonly the policy here is to block traffic from outside your organization into it and allow traffic within your organization.

In Standard mode, you can configure in various pages a more granular default policy:
• **Traffic from specific sources into your organization** can be blocked or accepted by default. This configuration can be found in each specific sources’ edit mode:
  - External VPN sites - Configure default access from/to VPN > Site to Site Blade Control page.
  - Remote Access VPN users - Configure default access from VPN > Remote Access Blade Control page.
  - Wireless networks - Configure default access for each wireless network from the Access tab in each wireless network’s edit window in the Device > Wireless Network page.
  - DMZ network - Configure default access from the DMZ object’s edit window in the Device > Local Network page.

• **Traffic to defined server objects** as configured in each server’s edit window in the Access Policy > Firewall Servers page.

This page lets you add manual rules as exceptions to the default policy. In Strict mode, the default policy blocks everything and you configure access only through manual rules.

Within each section there are these sections:

• **Manual Rules** - Rules that you manually create.

• **Auto Generated Rules** - Rules that the system determines based on the initial Firewall Policy mode (Strict or Standard) as explained above. These rules are also influenced by other elements in the system. For example, when you add a server a corresponding rule is added to the Incoming, internal and VPN traffic section.

These are the fields that manage the rules for the Firewall Access Policy.

<table>
<thead>
<tr>
<th>Rule Base Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>Rule number in the Firewall rule base.</td>
</tr>
<tr>
<td>Source</td>
<td>IP address, network object, or user group that initiates the connection.</td>
</tr>
<tr>
<td>Destination</td>
<td>IP address or network object that is the target of the connection.</td>
</tr>
<tr>
<td>Application</td>
<td>Applications or web sites that are accepted or blocked. You can filter the list by common applications, categories, custom defined applications, URLs or groups. For more information, see Applications &amp; URLs. This field is only shown in the Outgoing access to the Internet section.</td>
</tr>
<tr>
<td>Service</td>
<td>Type of network service that is accepted or blocked.</td>
</tr>
<tr>
<td>Action</td>
<td>Firewall action that is done when traffic matches the rule.</td>
</tr>
<tr>
<td></td>
<td>For outgoing traffic rules, you can use the Customise messages option to configure &quot;Ask&quot; or &quot;Inform&quot; actions in addition to the regular Block or Accept actions. The messages shown can be set for these action types: Accept and Inform, Block and Inform, or Ask. Ask action lets the end user decide if this traffic is for work purposes or personal. See the Customise messages section below. Users will be redirected to a portal that shows a message or question. If a time range is set for the rule, a clock icon is shown.</td>
</tr>
<tr>
<td>Log</td>
<td>The tracking and logging action that is done when traffic matches the rule.</td>
</tr>
<tr>
<td>Comment /</td>
<td>Details shown immediately below the above fields for:</td>
</tr>
<tr>
<td>Auto generated rule</td>
<td>• Comments you enter when you create a rule.</td>
</tr>
<tr>
<td></td>
<td>• Rules that the system automatically generates. You can click the object name link in the comment to open its configuration tab.</td>
</tr>
</tbody>
</table>
The "Ask" action

The outgoing Rule Base gives the option to set an Ask action instead of just allow or block for browser based applications. There are several commonly used cases where this is helpful:

- This action can be used for traffic that is normally not allowed in your organization, but you do want it to be available for work-related purposes. End users are asked if they need to browse for work-related purposes and can continue without requiring the administrator to make changes to the access policy for this single event. For example, traffic to Facebook is generally blocked but you want your HR department to be able to access it for work-related purposes.

- Using this action for traffic to uncategorized URLs, can also give security against malware that managed to be installed inside your organization as a common use case for such malware is to access uncategorized URLs and it is blocked by the Ask action.

To create a new manually defined access rule:
1. Click the arrow next to New. When the page shows both Rule Bases, click New in the appropriate table.
2. Click one of the available positioning options for the rule: On Top, On Bottom, Above Selected, or Under Selected.
3. The Add Rule window opens. It shows the rule fields in two manners:
   - A rule summary sentence with default values.
   - A table with the rule base fields in a table.
4. Click the links in the rule summary or the table cells to select network objects or options that fill out the rule base fields. See the descriptions above.

   Note - The Application field is relevant only for outgoing rules.

   In the Source field, you can optionally choose between entering a manual IP address (network), a network object, or user group (to configure a user based policy, make sure the User Awareness blade is activated). Users can be defined locally on the appliance or externally in an Active Directory. For more details, see the Access Policy > User Awareness Blade Control page.
5. In the Write a comment field, enter optional text that describes the rule. This is shown as a comment below the rule in the Access Policy.
6. To limit the rule to a certain time range, select Apply only during this time and select the start and end times.
7. In outgoing rules, to limit the download traffic rate, select Limit download traffic of applications to and enter the Kbps rate.
8. In outgoing rules, to limit the upload traffic rate, select Limit upload traffic of applications to and enter the Kbps rate.
9. In incoming rules, to match only for encrypted VPN traffic, select Match only for encrypted traffic.
10. Click Apply. The rule is added to the outgoing or incoming section of the Access Policy.

To clone a rule:
Clone a rule to add a rule that is almost the same as the one that already exists.
1. Select a rule and click Clone.
2. Edit the fields as necessary.
3. Click Apply.

To edit a rule:
Note for Access Policy rules - you can only edit the tracking options for automatically generated rules.
1. Select a rule and click Edit.
2. Edit the fields as necessary.
3. Click Apply.

To delete a rule:
1. Select a rule and click Delete.
2. Click Yes in the confirmation message.
To enable or disable a rule:
- To disable a manually defined rule that you have added to the rule base, select the rule and click **Disable**.
- To enable a manually defined rule that you have previously disabled, select the rule and click **Enable**.

**To change the rule order:**

Note - you can only change the order of manually defined rules.

1. Select the rule to move.
2. Drag and drop it to the necessary position.

**Customize messages**

You can customize messages to let the Security Gateway communicate with users. This helps users understand that some websites are against the company’s security policy. It also tells users about the changing Internet policy for websites and applications. When you configure such messages, the user’s Internet browser shows the messages in a new window when traffic is matched on a rule using one of the message related actions.

These are the Action options and their related notifications:

<table>
<thead>
<tr>
<th>Rule base action</th>
<th>Notifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept and Inform</td>
<td>Shows an informative message to users. Users can continue to the application or cancel the request.</td>
</tr>
<tr>
<td>Block and Inform</td>
<td>Shows a message to users and blocks the application request.</td>
</tr>
<tr>
<td>Ask</td>
<td>Shows a message to users and asks them if they want to continue with the request or not. See above for more details.</td>
</tr>
</tbody>
</table>

**To customize messages:**

1. Click **Customize messages** in the **Outgoing access to the Internet** section.
2. Configure the options in each of these tabs:
   - **Accept and Inform**
   - **Block and Inform**
   - **Ask**
3. Configure the applicable fields for each of the notifications:
   - **Title** - Keep the default or enter a different title.
   - **Subject** - Keep the default or enter a different subject.
   - **Body** - Keep the default or enter different body text.
   - **Ask text** (only for Ask) - Keep the default text or enter different text
   - **User must enter textual reason input** (only for Ask) - Users must enter an explanation for their activity.
   - **Fallback action** - Select an alternative action (Block or Accept) for when the notification cannot be shown in the browser or application that caused the notification, most notably in non-web applications. If it is determined that the notification cannot be shown in the browser or application, the behavior is:
     - If the Fallback action is **Accept** - The user can access the website or application.
     - If the Fallback action is **Block** - The Security Gateway tries to show the notification in the application that caused the notification. If it cannot, the website or application is blocked, and the user does not see a notification.
   - **Frequency** - You can set the number of times that users get notifications for accessing applications that are not permitted by the policy. The options are:
     - Once a day
     - Once a week
     - Once a month
For example, in a rule that contains in the Application - Social Networking category, if you select **Once a day** as the frequency, a user who accesses Facebook multiple times will get one notification.

- **Redirect the user to URL** - You can redirect the user to an external portal, not on the gateway. In the **URL** field, enter the URL for the external portal. The specified URL can be an external system. It gets authentications credentials from the user, such as a user name or password. It sends this information to the gateway. Only applicable for the Block and Inform notification.

4. Click the **Customize** tab to customize a logo for all portals shown by the appliance (hotspot and captive portal used by User Awareness). Click **Upload**, browse to the logo file and click **Apply**. If necessary, you can revert to the default logo by clicking **Use Default**.

5. Click **Apply**.

![Firewall Access Policy](image)

**Defining Server Objects**

In the Servers page you can see a list of servers defined in your system. You can create, edit, delete or search for server objects. Server objects are network objects that are defined with their access and NAT (if applicable) policies.

New server objects are created using a wizard:

- **Step 1** - Select the server type.
- **Step 2** - Define the server's details.
- **Step 3** - Set up the server's access policy properties.
- **Step 4** - NAT configuration (if relevant)

After you create a server, one or more corresponding rules are automatically generated and added to the Access Policy automatically and shown in the Access Policy > Firewall Policy page. The comment in the rule shows the object name. You can click the object name link in the comment to open the Access tab in the Server Properties.
An easier way to define server objects is by detecting them in the Home > Active Computers page and saving them as servers. For example, this option automatically detects the MAC address of the server making configuration easier.

During the wizard:
- Click **Cancel** to quit the wizard.
- Click **Next** to move to the next page of the wizard.
- Click **Back** to go to an earlier page of the wizard.
- Click **Finish** to complete the wizard.

**To create a new object:**

Click **New**. The New Server Wizard opens and shows Step1: Server Type.

**Step 1: Server Type**

1. Select the server type. There are built-in types for common servers. You can manually define a server that listens to any configured ports and you can also change a common server type’s ports.
2. When selecting built-in types, you can optionally click **Edit** to edit the protocol ports.
3. When you select **Other Server**:
   - Select the **Protocol** (TCP, UDP, or both).
   - Enter the **TCP/UDP Ports** (enter port numbers and/or port ranges separated by commas, for example, 1,3,5-8,15).

**Step 2: Server Definitions**

1. Enter a **Name**, **IP address**, and **Comments** (optional).
2. Select the options that apply to the server. For more information see Users & Objects > Network Objects.
   - **Allow DNS server to resolve this object name** - When the gateway is the DNS server for your internal networks the name of the server/network object will be translated to its IP address if this option is selected.
   - **Exclude from DHCP service** - The internal DHCP service will not distribute the configured IP address of this server/network object to anyone.
     - Reserve IP address in DHCP service for MAC - The internal DHCP service will distribute the configured IP address only to this server/network object according to its MAC address.
     - Enter the **MAC address** - This is required for IP reservation. When you create the object from the Active Computers page, the MAC address is detected automatically.

**Step 3: Access**

1. Select the zones from which the server is accessible:
   - **All zones (including the Internet)** - Select this option to create a server that anyone from outside the organization can access. This option requires configuring how the server is accessible through NAT (in the next step).
   - **Only trusted zones (my organization)** - Select the applicable checkboxes. You can override these settings by adding manual access rules.
     - LAN - Physical internal networks.
     - Remote Access VPN users - Users that connect from their homes/mobile devices to the office.
     - Secure wireless networks - Password protected networks, not including guest networks.
     - DMZ - The network physically connected to the DMZ port when it is not used for a secondary Internet connection.
     - Remote VPN sites - Networks defined behind gateways to remote VPN sites.
   - **Manually configure access policy to this server** - Select this option when you want to define an access policy using only manual access rules.
2. If you do not want the server to be accessible to pings, clear the **Allow access to server using ICMP (ping)** checkbox.
3. Select the logging policy of traffic to the server:
   - **Log blocked connections**
• Log accepted connections

Step 4: NAT (when server is accessible from the Internet)

1. Select the relevant option:
   • **Hide Behind Gateway (Port Forwarding)** - This configures access through **Port Forwarding**. The appliance has an external routable IP address which is configured in its Internet connections (on the Device > Internet page). Traffic to the appliance to the ports configured for the server object in step 1 of the wizard is forwarded to the server. This allows traffic from the Internet into the organization (public servers) while still using one external routable IP address.
   • **Static NAT** - This configures access through **Static NAT**. If a routable IP address was purchased for the server, enter it in the address field. While the rest of the internal network is hidden behind the gateway’s external IP address, this specified server will use its own accessible IP address. Traffic to the specified IP address on relevant ports as configured in step 1 of the wizard will be forwarded to this server.
     - **Hide outgoing traffic from the server behind this IP address** - Select this checkbox to create an outgoing NAT rule where the original source is the server (internal IP address) and the translated source is the server’s static IP address.
   • **No NAT** - This option is only relevant if the **Hide internal networks behind the Gateway’s external IP address** option in the Access Policy > NAT Control page is set to OFF (see above for details). It means there are no NAT rules on the server.

2. When you have multiple internal servers that use the same port, select **Redirect from port** and enter a different port number that will be used when accessing this server from the Internet. Traffic to the server on the port you entered will be forwarded to the server’s port.

3. By default, the **Force translated traffic to return to the gateway** checkbox is selected. This allows access from internal networks to external IP addresses of servers through the local switch. The source is translated to “This Gateway”. When the checkbox is cleared, the source is “Any” and there is no access from the internal network to external IP addresses through the switch.

When you complete the wizard, the server is added to the list of servers on the page and the automatically generated access rules are added to the Access Policy > Firewall Policy Rule Base. If NAT was defined for the server, automatically generated forwarding rules are added to the Access Policy > Firewall NAT page.

**To change the Remote Access port settings:**

If there is a conflict between the default remote access port (port 443) and a server defined with the same port, a message is shown. You must change the default remote access port if you want the server to use port 443.

1. Click the **Change Remote Access port** link.
   The Remote Access Port Settings window opens.
2. In **Remote Access port**, enter a new port number.
3. Make sure ** Reserve port 443 for port forwarding** is selected.
4. Click **Apply**.

   **Note** - This page is available from the Firewall and NAT sections on the Access Policy tab.

---

**Working with User Awareness**

In the User Awareness > Blade Control page you can turn the blade on or off and use the configuration wizard to configure sources for getting user identities, for logging and configuration purposes.

User Awareness lets you configure Check Point 1100 Appliance to show user based logs instead of IP address based logs and enforce access control for individual users and user groups.

To use User Awareness, you must configure identification methods to get information about users and user groups. After the gateway acquires the identity of a user, user-based rules can be enforced on the network traffic in the Access Policy.

User Awareness can use these sources to identify users:
- **Active Directory Queries** - Seamlessly queries the AD (Active Directory) servers to get user information.
• Browser-Based Authentication - Uses a portal to authenticate either locally defined users or as a backup to other identification methods.

**AD Query**

Check Point 1100 Appliance registers to receive security event logs from the AD domain controllers when the security policy is installed. This requires administrator privileges for the AD server. When a user authenticates with AD credentials, these event logs are generated and are sent to the Security Gateway. Check Point 1100 Appliance can then identify the user based on the AD security event log.

**Browser-Based Authentication**

Browser-Based Authentication uses a web interface to authenticate users before they can access network resources or the Internet. When users try to access a protected resource, they must log in to a web page to continue. This is a method that identifies locally defined users or users that were not successfully identified by other methods. It is possible to configure the Browser-Based Authentication to appear for all traffic but because this method of identification is not seamless to the end users, it is commonly configured to appear when accessing only specific network resources or the Internet to avoid the overhead required from end users when identifying themselves. For traffic that is not HTTP based, it is also possible to configure that all unidentified users will be blocked from accessing the configured resources or Internet until they identify themselves first using the Browser-Based Authentication.

To turn on User Awareness on or off:

- Select the **On** or **Off** option.

  **Note** - When the blade is managed by Cloud Services, a lock icon is shown. You cannot toggle between the on and off states. If you change other policy settings, the change is temporary. Any changes made locally will be overridden in the next synchronization between the gateway and Cloud Services.

There is a User Awareness configuration wizard that helps you enable and configure the blade. You can use the configuration wizard to configure the basic details of the identity sources. After initial configuration, you can select the Active Directory Queries or Browser-Based Authentication checkboxes under Policy Configuration and click **Configure** to configure more advanced settings.

**To configure User Awareness with the wizard:**

1. Click the **configuration wizard** link.
   
The User Awareness Wizard opens.

2. Select one or more user identification methods (see above for descriptions of methods) and click **Next**.

3. For Active Directory Queries:
   a) If you have an existing Active Directory server, click **Use existing Active Directory servers**.
   b) To define a new Active Directory server, click **Define a new Active Directory server**.
      
      (i) Enter the **Domain**, **IP address**, **User name**, **Password**, and **User DN**. For the User DN, click **Discover** for automatic discovery of the DN of the object that represents that user or enter the user DN manually.
      
      (ii) You can optionally select, **Use user groups from specific branch only** if you want to use only part of the user database defined in the Active Directory. In **Branch**, enter the branch name.
   c) Click **Next**.

4. For Browser-Based Authentication:
   a) To block access for unauthenticated users when the portal is not available, select **Block unauthenticated users when the captive portal is not applicable**. This configuration option forces users using non-HTTP traffic to login first through Browser-Based Authentication.
   b) Select if unidentified users should be redirected to captive portal for All traffic or Specific destinations. In most cases, all traffic is not used because it is not a seamless identification method.
   c) Under Specific destinations, select **Internet** or **Selected network objects**. If you select Selected network objects, select the objects from the list or create new objects.

5. Click **Finish**.
To edit settings and configure portal customization for Browser-Based Authentication:

1. Under **Policy Configuration**, select **Browser-Based Authentication** and click **Configure**.
2. In the **Identification** tab, you can edit settings configured in the wizard if necessary.
3. In the **Customization** tab, select the relevant options:
   - **Users must agree to the following conditions** - You can require that users agree to legal conditions. In the text box, enter the conditions that are shown to the user.
   - **Upload** - Lets you upload a company logo. **Browse** to the logo file and click **Apply**. The logo will be shown in the **Displayed Logo** section.
   - **Use Default** - Uses the default logo.
4. In the **Advanced** tab:
   - **Portal Address** - Keep the default setting which is the address the Captive Portal runs on Check Point 1100 Appliance or enter a different portal address.
   - **Session timeout** - Sets for how long an authenticated user can access the network or Internet before they have to authenticate again.
   - **Force quick cache timeout if user closes portal window** - When the portal is closed, the user is logged out.
5. Click **Apply**.

   **Note** - This page is available from the Access Policy and Users & Objects tabs.

---

**Configuring the Quality of Service (QoS) - Bandwidth Control Blade**

In the Access Policy > QoS Blade Control page you can activate QoS, define the QoS default policy, and add manual rules.

The QoS (bandwidth control) policy is a set of rules that lets you set bandwidth parameters to control the flow of communication to and from your network. These rules make sure that important traffic is prioritized so your business can work with minimum disruption when there is network congestion.

QoS can be activated on Internet connections and requires at least one Internet connection to be configured with the maximum download and/or upload speeds provided by your ISP. For more information about your download and upload speeds, contact your local ISP.

This page lets you configure a default simplified QoS policy. A more advanced policy can be configured in the Access Policy > QoS Policy page.

QoS policy applies to traffic over external interfaces only.

**QoS**

Select one of the options to set the Access Policy control level:

- **On**
  - Enforces the default QoS policy.

- **Off**
  - QoS default policy is not enforced.

   **Note** - When the blade is managed by Cloud Services, a lock icon is shown. You cannot toggle between the on and off states. If you change other policy settings, the change is temporary. Any changes made locally will be overridden in the next synchronization between the gateway and Cloud Services.

**QoS default policy**

Select the options for your default QoS policy. Alternatively, you can define your entire QoS policy through the Access Policy > QoS Policy page by clearing all of the checkboxes on this page.
- **Ensure low latency priority for Delay Sensitive Services (e.g. VoIP)** - Select this option to make sure that traffic that is very sensitive to delay is prioritized. For example, IP telephony, videoconferencing, and interactive protocols that must have a short response time, such as Telnet.

  Click the Delay Sensitive Services link to see the default services included and add new ones or remove existing if necessary. QoS tries to send these packets before other packets. This option adds a rule to the QoS Policy Rule Base.

- **Guarantee X% of the bandwidth to VPN/all traffic on all services** - Select this option to guarantee a minimum bandwidth for the specified traffic on all services or selected services.

  Enter the bandwidth percentage, change the type of traffic if needed, and if necessary click the all services link to edit a list of selected guaranteed services. This option adds a rule to the QoS Policy Rule Base.

- **Limit Bandwidth Consuming Applications** - Applications that use a lot of bandwidth can decrease performance necessary for important business applications.

  Click the Bandwidth Consuming Applications link to see the default applications/categories included and add new ones or remove existing if necessary.

  Select the Limit Bandwidth Consuming Applications checkbox and choose Download and/or Upload to determine where the limit will be enforced and the maximum bandwidth in each of the selected options. Bandwidth consuming applications control can also be configured in the Access Policy > Firewall Blade Control and Policy pages.

**To add a guaranteed service to the default policy:**

1. Select the Guarantee X% of the bandwidth to X traffic on all/selected services option and click the services link.

   The Edit guaranteed services window opens.

2. Select Selected services.

3. Click Select to show the full list of available services and choose the relevant checkboxes.

4. Click New if the existing list does not contain the service you need. For information on creating a new service, see the Users & Objects > Services page.

5. Click Apply.

**Working with the QoS Policy**

In the Access Policy > QoS Policy page you can manage the QoS default policy and add manual rules if necessary.

The top of the page shows information regarding these limits:

- **Bandwidth Consuming Applications** - If you set download and upload rates in the Access Policy > QoS Blade Control page or Access Policy > Firewall Blade Control page. If you see the disabled link, click it to configure the rates here.

- **Low latency traffic** - Shows the maximum percentage of bandwidth that can be reserved for low latency traffic. Without setting a maximum percentage, traffic that does not require low latency might be starved (might not be handled at all). To change the value, click the percentage link.

The QoS Policy Rule Base can be viewed on this page. For each rule, you see these fields:

<table>
<thead>
<tr>
<th>Rule Base Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>Rule number in the QoS policy.</td>
</tr>
<tr>
<td>Source</td>
<td>Network object that starts the connection.</td>
</tr>
<tr>
<td>Destination</td>
<td>Network object that completes the connection.</td>
</tr>
<tr>
<td>Service</td>
<td>Type of network service for which bandwidth is adjusted according to weight, limit, and guarantee.</td>
</tr>
<tr>
<td>Guarantee/Limit</td>
<td>Lets you set a percentage that limits the bandwidth rate of traffic and/or guarantees the minimum bandwidth for traffic. Another option is to mark the traffic as low latency. This guarantees that it will be prioritized accordingly.</td>
</tr>
<tr>
<td>Rule Base Field</td>
<td>Description</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Weight</td>
<td>The unit used to divide available bandwidth once traffic has exceeded the maximum bandwidth configured for the Internet connection. See below.</td>
</tr>
<tr>
<td>Track</td>
<td>The tracking and logging action that is done when traffic matches the rule.</td>
</tr>
<tr>
<td>Comment</td>
<td>An optional field that shows a comment if you entered one. For system generated rules of the default policy a Note is shown.</td>
</tr>
</tbody>
</table>

**Weight**

QoS divides available bandwidth across the QoS policy rules according to weight. Using weights instead of specific percentages is a flexible way for the QoS engine to allocate bandwidth if the maximum bandwidth has been exceeded according to the specific traffic at that point. This maximizes the usage of the bandwidth.

For example, in an organization, Web traffic is deemed three times as important as FTP traffic. Rules with these services are assigned weights of 30 and 10 respectively. If the lines are congested, QoS keeps the ratio of bandwidth allocated to Web traffic and FTP traffic at 3 to 1.

You can set options for the default policy or you can manually define rules for the QoS policy. If a rule is not using all of its bandwidth, the leftover bandwidth is divided with the remaining rules, in accordance with their relative weights. In the above example, if only one Web and one FTP connection are active and they are competing, the Web connection will receive 75% (30/40) of the leftover bandwidth, and the FTP connection will receive 25% (10/40) of the leftover bandwidth. If the Web connection closes, the FTP connection will receive 100% of the bandwidth.

In the **Weight** field, enter a value that indicates the services importance relative to other defined services. For example, if you enter a weight of 100 for a service and set 50 for a different service, the first service is allocated two times the amount of bandwidth as the second when lines are congested.

**To create a QoS rule:**

1. Click the arrow next to **New**.
2. Click one of the available positioning options for the rule: **On Top**, **On Bottom**, **Above Selected**, or **Under Selected**. The Add Rule window opens. It shows the rule fields in two manners:
   - A rule summary sentence with default values.
   - A table with the rule base fields in a table.
3. Click the links in the rule summary or the table cells to select network objects or options that fill out the rule base fields. See the descriptions above.
   - **Note** - You can either choose for a specific rule to have a specified guarantee and/or limit or be marked as low latency traffic. In case of the latter, there is a single maximum limit percentage for ALL low latency traffic which can be configured globally. See above.
4. To match only for encrypted (VPN) traffic, select **Match only for encrypted traffic**. The Service column will show "encrypted" if chosen.
5. To limit the rule to a specified time range, select **Apply only during this time** and select the start and end times. Only connections that began during this time range are inspected.
6. **DiffServ Mark** is a way to mark connections so a third party will handle it. To mark packets that will be given priority on the public network according to their DSCP, select **DiffServ Mark (1-63)** and select a value. To use this option, your ISP or private WAN must support DiffServ. You can get the DSCP value from your ISP or private WAN administrator.
7. In the **Write a comment** field, enter optional text that describes the rule. This is shown as a comment below the rule.
8. Click **Apply**.

**To edit a rule:**

Note for Access Policy rules - you can only edit the tracking options for automatically generated rules.

1. Select a rule and click **Edit**.
2. Edit the fields as necessary.
3. Click **Apply**.
To delete a rule:
1. Select a rule and click Delete.
2. Click Yes in the confirmation message.

To enable or disable a rule:
- To disable a manually defined rule that you have added to the rule base, select the rule and click Disable.
- To enable a manually defined rule that you have previously disabled, select the rule and click Enable.

To change the rule order:
Note - you can only change the order of manually defined rules.
1. Select the rule to move.
2. Drag and drop it to the necessary position.

Defining NAT
In the Access Policy > Firewall NAT page you can configure NAT for outgoing traffic and see how many servers are defined in the system. Servers are defined in the Access Policy > Servers page and are network objects configured with their access and NAT settings. This lets you configure servers that are accessible from the Internet even if they don't have a routable IP address. You can also configure servers with NAT settings from this page.

To disable NAT for outgoing traffic (hide NAT):
By default, NAT is configured for outgoing traffic. If it is necessary to disable NAT, make sure Hide internal networks behind the Gateway's external IP address is set to OFF.

Important - In most cases, turning off the hide NAT feature will cause Internet connectivity issues. If your appliance is the gateway of your office to the Internet DO NOT set to off without consulting with networking experts.

To configure a server that is routable from the Internet (server with NAT):
1. Click New Server (forwarding rule).
2. See the Access Policy > Servers page for instructions on how to use the server wizard.
3. In the Access step of the server wizard, select one of the options when asked from where this server is accessible.
4. In the NAT step of the server wizard, select the relevant option:
   - **Hide Behind Gateway (Port Forwarding)** - This configures access through Port Forwarding. The appliance has an external routable IP address which is configured in its Internet connections (on the Device > Internet page). Traffic to the appliance to the ports configured for the server object in step 1 of the wizard is forwarded to the server. This allows traffic from the Internet into the organization (public servers) while still using one external routable IP address.
   - **Static NAT** - This configures access through Static NAT. If a routable IP address was purchased for the server, enter it in the address field. While the rest of the internal network is hidden behind the gateway's external IP address, this specified server will use its own accessible IP address. Traffic to the specified IP address on relevant ports as configured in step 1 of the wizard will be forwarded to this server.
     - **Hide outgoing traffic from the server behind this IP address** - Select this checkbox to create an outgoing NAT rule where the original source is the server (internal IP address) and the translated source is the server's static IP address.
   - **No NAT** - This option is only relevant if the Hide internal networks behind the Gateway's external IP address option in the Access Policy > NAT Control page is set to OFF (see above for details). It means there are no NAT rules on the server.
5. When you have multiple internal servers that use the same port, select Redirect from port and enter a different port number that will be used when accessing this server from the Internet. Traffic to the server on the port you entered will be forwarded to the server's port.
6. By default, the Force translated traffic to return to the gateway checkbox is selected. This allows access from internal networks to external IP addresses of servers through the local switch. The source
is translated to “This Gateway”. When the checkbox is cleared, the source is “Any” and there is no access from the internal network to external IP addresses through the switch.

7. Click Finish.

After you create a server with NAT settings, one or more corresponding rules are automatically generated and added to the NAT rules under the Auto Generated Forwarding Rules section. Click View NAT rules to see them. The comment in the rule shows the server object name. You can click the object name link to open the Access tab of the server’s properties or click the Servers page link to go to the Firewall Servers page.

Advanced - Manual NAT Rules

Note - For the majority of cases, manual NAT rules are not necessary. There is no need to use this option unless you are an experienced network administrator.

A more advanced way to configure address translation is by defining manual NAT rules. If servers with NAT are configured, the manual NAT rules will not apply to them. However, they will apply even when Hide NAT is activated.

These are the fields that manage the NAT rules.

<table>
<thead>
<tr>
<th>Rule Base Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Source</td>
<td>The network object (a specified IP address) or network group object (a specified IP address range) that is the original source of the connections to translate.</td>
</tr>
<tr>
<td>Original Destination</td>
<td>The network object (a specified IP address) or network group object (a specified IP address range) that is the original destination of the connections to translate.</td>
</tr>
<tr>
<td>Original Service</td>
<td>The original service used for the connections to translate.</td>
</tr>
<tr>
<td>Translated Source</td>
<td>The network object or network group object that is the new source to which the original source is translated.</td>
</tr>
<tr>
<td>Translated Destination</td>
<td>The network object or network group object that is the new destination to which the original destination is translated.</td>
</tr>
<tr>
<td>Translated Service</td>
<td>The new service to which the original service is translated.</td>
</tr>
</tbody>
</table>

To create a new NAT rule:
1. If the NAT rules table is not shown on the page, click the View NAT rules link.
2. Click the arrow next to New.
3. Click one of the available positioning options for the rule: On Top, On Bottom, Above Selected, or Under Selected.
   The Add Manual NAT Rule window opens. It shows the rule fields in two manners:
   - A rule summary sentence with default values.
   - A table with the rule base fields in a table.
4. Click the links in the rule summary or the table cells to select network objects or options that fill out the rule base fields. See the descriptions above.
5. In the Write a comment field, enter optional text that describes the rule. This is shown as a comment below the rule in NAT Manual Rules.
6. Select the Hide multiple sources behind the translated source addresses if you want the original source to contain multiple IP addresses, IP ranges, networks, etc. and the translated source to be a single IP address.

   When this option is not selected, you can still use an IP range in the Original Source and a different IP range of the same size in the Translated Source. This rule will do the IP address translation from one range to another, respectively (the first IP in the first range is translated to the first IP in the second range, etc).
7. Select **Serve as an ARP Proxy for the original destination's IP address** for the gateway to reply to ARP requests sent to the original destination's IP address. Note that this does not apply to IP ranges or networks.

8. Click **Apply**.

After you create manual rule, it is added to the NAT rules table under the Manual NAT Rules section.

**To edit a rule:**

Note for Access Policy rules - you can only edit the tracking options for automatically generated rules.

1. Select a rule and click **Edit**.
2. Edit the fields as necessary.
3. Click **Apply**.

**To delete a rule:**

1. Select a rule and click **Delete**.
2. Click **Yes** in the confirmation message.

**To enable or disable a rule:**

1. To disable a manually defined rule that you have added to the rule base, select the rule and click **Disable**.
2. To enable a manually defined rule that you have previously disabled, select the rule and click **Enable**.

**To change the rule order:**

Note - you can only change the order of manually defined rules.

1. Select the rule to move.
2. Drag and drop it to the necessary position.

**Defining NAT Server Objects**

See Defining Server Objects (on page 59).

**Advanced - Creating and Editing NAT Rules**

Note - For the majority of cases, manual NAT rules are not necessary. There is no need to use this option unless you are an experienced network administrator. See the Access Policy > NAT Control page for the commonly used options.

In the Access Policy > NAT Manual Rules page you can create and edit custom NAT rules. If servers with NAT are configured the manual NAT rules will not apply to them. However, they will apply even when Hide NAT is activated.

These are the fields that manage the NAT rules.

<table>
<thead>
<tr>
<th>Rule Base Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Source</td>
<td>The network object (a specified IP address) or network group object (a specified IP address range) that is the original source of the connections to translate.</td>
</tr>
<tr>
<td>Original Destination</td>
<td>The network object (a specified IP address) or network group object (a specified IP address range) that is the original destination of the connections to translate.</td>
</tr>
<tr>
<td>Original Service</td>
<td>The original service used for the connections to translate.</td>
</tr>
<tr>
<td>Translated Source</td>
<td>The network object or network group object that is the new source to which the original source is translated.</td>
</tr>
<tr>
<td>Translated Destination</td>
<td>The network object or network group object that is the new destination to which the original destination is translated.</td>
</tr>
</tbody>
</table>
**Rule Base Field** | **Description**
---|---
Translated Service | The new service to which the original service is translated.

**To create a new NAT rule:**
1. Click the arrow next to **New**.
2. Click one of the available positioning options for the rule: **On Top**, **On Bottom**, **Above Selected**, or **Under Selected**.
   The Add Rule window opens. It shows the rule fields in two manners:
   - A rule summary sentence with default values.
   - A table with the rule base fields in a table.
3. Click the links in the rule summary or the table cells to select network objects or options that fill out the rule base fields. See the descriptions above.
4. In the **Write a comment** field, enter optional text that describes the rule. This is shown as a comment below the rule in NAT Manual Rules.
5. Select the **Hide multiple sources behind the translated source address/es** if you want the original source to contain multiple IP addresses, IP ranges, networks, etc. and the translated source to be a single IP address.
   When this option is not selected, you can still use an IP range in the Original Source and a different IP range of the same size in the Translated Source. This rule will do the IP address translation from one range to another, respectively (the first IP in the first range is translated to the first IP in the second range, etc).
6. Click **Apply**.

**To edit a rule:**
Note for Access Policy rules - you can only edit the tracking options for automatically generated rules.
1. Select a rule and click **Edit**.
2. Edit the fields as necessary.
3. Click **Apply**.

**To delete a rule:**
1. Select a rule and click **Delete**.
2. Click **Yes** in the confirmation message.

**To enable or disable a rule:**
- To disable a manually defined rule that you have added to the rule base, select the rule and click **Disable**.
- To enable a manually defined rule that you have previously disabled, select the rule and click **Enable**.

**To change the rule order:**
Note - you can only change the order of manually defined rules.
1. Select the rule to move.
2. Drag and drop it to the necessary position.
Managing Threat Prevention

This section describes how to set up and manage the Intrusion Prevention System (IPS), Anti-Virus, and Anti-Spam blades.

*Configuring the IPS Blade*

In the Threat Prevention > IPS Blade Control page you can activate the Intrusion Prevention System (IPS) to block potentially malicious attempts to exploit known vulnerabilities in files and network protocols.

On this page you can activate the blade to prevent such attacks or set it to detect mode only (Intrusion Detection System mode) and use the logs to understand if your system is experiencing attack attempts.

Check Point uses a large database of signature based protections and this page lets you configure a policy that will maximize connectivity and security in your environment. Each policy represents a different profile of protections according to their severity, performance impact, and confidence level.

**To enable/disable the IPS blade:**
1. Select **On** or **Off**.
2. Click **Apply**.

   *Note* - When the blade is managed by Cloud Services, a lock icon is shown. You cannot toggle between the on and off states. If you change other policy settings, the change is temporary. Any changes made locally will be overridden in the next synchronization between the gateway and Cloud Services.

This page shows how many IPS events were detected and has a link to the IPS Logs in the Logs & Monitoring > Security Logs page.

You can also see if any exceptions were defined for the IPS policy. Exceptions are rules that let you exclude traffic from IPS inspection for all protections or a specific protection. This can be used for troubleshooting purposes.

**To add an IPS exception:**
1. Click **Add exception**.
   
   The **Add Rule: IPS Network Exceptions** window opens.
2. Configure the IPS exception.
3. Click **Apply**.

As a service based feature, this page also shows you the update status. For example:

- **Up to date**
- **Updated service unreachable** - This usually results from a loss in Internet connectivity. You must check your Internet connection in the Device > Internet page and contact your ISP if the problem persists.
- **Not up to date** - A new update package is ready to be downloaded but the scheduled hour for updates has not occurred yet. Updates are usually scheduled for off-peak hours (weekends or nights).

**To schedule updates:**
1. Click the **Schedule** link at the bottom of the page. You can also hover over the icon next to the update status and select the link from there.
2. Choose the blades for which to schedule updates. You must manually update the rest of the blades when new updates packages are available and a not up to date message is shown in the status bar at the bottom of the WebUI application.
3. Select the **Recurrence** time frame:
   - **Daily** - Select the **Time of day**.
   - **Weekly** - Select the **Day of week** and **Time of day**.
   - **Monthly** - Select the **Day of month** and **Time of day**.
4. Click **Apply**.
To toggle between IPS and IDS (detect only) modes:
1. Clear or select the Detect mode (IDS) checkbox.
2. Click Apply.

In IDS mode only logs will appear and the blade will not block any traffic.

To configure the IPS Policy:
Select one of these options:
- **Typical** - A protection profile most suitable for small/medium sized businesses that gives the best mixture of security and performance.
- **Strict** - A protection profile that focuses on security.
- **Custom** - A protection profile that you can manually define. After you select this option, click Configure.

To configure a Custom IPS Policy:
Each protection has three defining parameters whose levels are defined by the Check Point IPS service:
- **Severity** (how critical is the potential threat),
- **Confidence-Level** (protections with a lower confidence-level provide protection against a wide variety of attack vectors at the risk of more false-positives), and
- **Performance Impact** (how the appliance's performance is affected by activating these protections).

In addition, protections are divided into those that protect servers and those that protect clients.

1. Select which type of protections to activate:
   - **Client protections**
   - **Server protections** - If your environment does not include any servers within the organization that are accessible from the Internet you might consider clearing this option.

2. Select which protections should be deactivated according to each of the protections parameters according to one or more of these levels:
   - **Disable protections with severity X or below** - You can decide the level of severity under which protections will not be activated. Choose between low, medium, high, critical.
   - **Disable protections with confidence-level X or below** - You can decide the level of confidence-level under which protections will not be activated. Choose between low, medium-low, medium, medium-high, and high.
   - **Disable protections with performance impact X or above** - You can decide the level of performance impact over which protections will not be activated. Choose between very low, low, medium, and high.

3. Select **Disable Protocol Anomalies** if you want to disable protections against protocol anomalies.

   Most of the IPS protections protect against malicious attempts to exploit vulnerabilities but there are two other types of protections:
   - **Protocol anomalies** - Protections of this type detect and block irregularities in protocols. Such irregularities are not necessarily indicative of a malicious attempt but many malicious attempts use such irregularities.
   - **Protocol control** - Protections of this type detect and block usage of protocol or files. They let you block those specific protocols or files according to your organization's policy. This is a form of access control within the IPS blade. Protocol control protections are not activated automatically by the IPS policy. You can view them and manually activate each one according to your organization's policy through the Threat Prevention > IPS Protections List page.

4. Alternatively, you can set all the policy parameters to be the same as the built in strict or typical profiles and then make manual adjustments using the steps above. Choose **Load default settings** and the appropriate profile to do so.

To import an IPS update offline:
On rare occasions, there are organizations where the gateway is without Internet connectivity, but IPS is still required. Please contact Check Point Support to receive an offline IPS update package.

1. Click **import** manually at the bottom of the page.
2. **Browse** to the offline package file you received from Check Point Support.
3. Click **Import**.
Configuring IPS Exceptions

In the Threat Prevention > IPS Exceptions page you can configure exception rules for traffic which the IPS engine will not inspect. These rules can also apply to a single IPS protection.

To add a new IPS exception rule:
1. Click New.
2. Click the links in the rule summary or the table cells to select network objects or options that fill out the exception rule fields.
   - Protection - Select either All IPS protections or a specific IPS protection from the list.
   - Source - Network object that initiates the connection.
   - Destination - Network object that is the target of the connection.
   - Service/Port - Type of network service. Making an exception for a specific protection on a specific service/port might cause the protection to be ineffective.
3. Optionally add a comment in the Write a comment field.
4. Click Apply.

To edit or delete an IPS exception rule:
1. Select the relevant rule.
2. Click Edit or Delete.

Viewing the Protections List

In the Threat Prevention > IPS Protections List page you can view the signature based protections that the appliance has downloaded as part of the IPS service blade. You can see which of the protections are activated according to the policy you configured in the Threat Prevention > IPS Blade Control page.

You can see the details of each protection and also configure a manual override for individual protections’ action, and tracking options.

You can either search for a specific protection by entering a name in the filter box or by scrolling the pages using the next and previous page buttons at the bottom of the page.

These are the fields that manage IPS exceptions:
- Protection - Name of IPS protection
- Protection Type - Shows if the protection applies to servers, clients or both
- Category - Category of the protection
- Action - Firewall action for this protection, the word overridden indicates a manual override
- Severity - Probable severity of a successful attack to your environment
- Confidence - How confident IPS is that recognized attacks are actually undesirable traffic
- Performance - How much this protection and its resources affect gateway or server performance

To manually override a specific protection’s configuration:
1. Select a protection from the list.
2. Click Edit.
   - The Protection Settings window opens.
3. Select the Override IPS policy action checkbox and select the relevant option:
   - Prevent
   - Detect
   - Inactive
   - The protection's action will not be affected anymore by the IPS policy configuration.
4. Select a Track option for the protection.
5. Click Apply.
**Advanced IPS Configuration**

In the Threat Prevention > IPS Engine Settings page you can configure advanced configuration settings for the IPS engine.

---

**Note** - Many of the configurations below are advanced and should only be used by experienced administrators.

---

**To change the monitoring setting:**

Select the relevant event tracking option - Log or Alert (shown as a highly important log).

**To configure the error page shown by web based IPS protections:**

Some web based protections can show an error page upon detection. This error page is configurable.

The protections that support the error page:

- Malicious Code protector
- Cross-Site Scripting
- LDAP Injection
- SQL Injection
- Command Injection
- Directory Traversal
- Directory Listing
- Error Concealment
- HTTP Format Sizes
- ASCII Only Request
- ASCII Only Response Headers
- HTTP Methods

Select one of these options that will apply to all such protections:

- **Do not show**
- **Show pre-defined HTML error page** - You can configure an HTML page that will open upon detection of an attack. Click **Configure** to customize the HTML page. Select the relevant options:
  - **Logo URL** - Optionally enter a URL that leads to your company logo.
  - **Show error code** - Shows an error code that provides more information about the detected attack. This is not recommended because the information can be misused by an attacker.
  - **Send detailed status code** - You can enter manually defined text that will be shown in the HTML page. Enter the text in the **Description** box.
  - **Redirect to another URL** - Enter a URL to which users will be redirected upon detection of an attack. You can also choose to add an **error code** that provides more information about the detected attack. This is not recommended because the information can be misused by an attacker.

---

**To change the protection scope of the IPS engine:**

Select one of the options:

- **Protect internal hosts only** - The IPS engine will only protect against attacks targeted on clients and servers that are inside the organization. The IPS engine does not waste resources on protecting hosts outside your organization.
- **Perform IPS inspection on all traffic** - This option is less recommended as it consumes more resources.

---

**To configure the IPS engine to bypass mode when the appliance is under heavy load:**

1. Activate the feature by selecting the **Bypass IPS inspection when gateway is under heavy load** checkbox.
2. Configure tracking options for this feature by selecting what type of log to issue upon bypass.
3. Click **Configure** to choose the thresholds upon which IPS engine toggles between bypass and inspection modes. Follow the instructions in the window that opens and click **Apply**.

Thresholds are configured for CPU Usage and Memory Usage. There is always a high watermark and a low watermark. Bypass occurs when the high watermark is exceeded and the IPS engine continues inspection when the load drops below the low watermark. In this manner, when under load, the IPS engine does not toggle between modes too frequently.

**To apply all changes made on this page:**

Click **Apply**.

---

**Configuring the Anti-Virus Blade**

In the Threat Prevention > Anti-Virus Blade Control page you can activate the Anti-Virus engine to block viruses that pass through web and mail traffic (HTTP and SMTP) as well as through the File Transfer Protocol (FTP).

On this page you can activate the blade to prevent virus attacks or set it to detect mode only and use the logs to understand if your system is experiencing virus attacks without disrupting connectivity. You can also configure when files will be inspected (by default only incoming files are inspected).

Check Point uses a large signature database that is updated through the Anti-Virus service.

**To enable/disable the Anti-Virus blade:**

1. Select **On** or **Off**.
2. Click **Apply**.

Note - When the blade is managed by Cloud Services, a lock icon is shown. You cannot toggle between the on and off states. If you change other policy settings, the change is temporary. Any changes made locally will be overridden in the next synchronization between the gateway and Cloud Services.

As a service based feature, this page also shows you the update status. For example:

- Up to date
- Updated service unreachable - This usually results from a loss in Internet connectivity. You must check your Internet connection in the Device > Internet page and contact your ISP if the problem persists.
- Not up to date - A new update package is ready to be downloaded but the scheduled hour for updates has not occurred yet. Updates are usually scheduled for off-peak hours (weekends or nights).

**To schedule updates:**

1. Click the **Schedule Updates** link at the bottom of the page. You can also hover over the icon next to the update status and select the link from there.
2. Choose the blades for which to schedule updates. You must manually update the rest of the blades when new updates packages are available and a not up to date message is shown in the status bar at the bottom of the WebUI application.
3. Select the **Recurrence** time frame:
   - **Daily** - Select the **Time of day**.
   - **Weekly** - Select the **Day of week** and **Time of day**.
   - **Monthly** - Select the **Day of month** and **Time of day**.
4. Click **Apply**.

**To configure the Anti-Virus engine to work in detect only mode:**

1. Select the **Detect-only mode** checkbox.
2. Click **Apply**.

In Detect-only mode only logs will appear and the blade will not block any files.

**To configure the Anti-Virus scanning policy:**

Select the applicable options:

- **Scan incoming files** - Files originating from outside the organization are inspected.
- **Scan outgoing files** - Files originating from within the organization to the Internet are inspected.
- **Scan files between X** - There are two options for X:
  - **DMZ to internal networks** - Files originating from the DMZ network are inspected.
  - **All internal networks** - Files transferred between any two internal networks are inspected.

For each of the above options, you can decide on which type of traffic files are inspected by clicking the **protocol link** in each line and in the window that opens, select the applicable options:

- **Web (HTTP)**
- **Mail (SMTP and POP3)**
- **File Transfer Protocol (FTP)**

Select the relevant **tracking option** - Log or Alert (shown as a highly important log).

### Configuring Anti-Virus Exceptions

In the Threat Prevention > Anti-Virus Exceptions page you can configure network objects that traffic involving them will not be inspected by the Anti-Virus engine.

The table shows this information:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object Name</td>
<td>The name of the object that is not inspected.</td>
</tr>
<tr>
<td>Type</td>
<td>Single IP, IP Range, or Network.</td>
</tr>
<tr>
<td>IP Address</td>
<td>The object's IP address.</td>
</tr>
</tbody>
</table>

**To add or remove network objects from the Anti-Virus exception list:**

1. Click **Add** or **Manage Exceptions**.
2. Select an object from the list or click **New** to create a new object. For information on creating a new object, see Users & Objects > Network Objects page. The top of the table shows the selected network objects names and also lets you quickly remove them from the exceptions list by clicking on the "x" next to each name.
3. Click **Apply**.

### Setting Actions for File Types

In the Threat Prevention > Anti-Virus File Types page you can view the file types and set prescribed actions to take place when these files pass through the Anti-Virus engine.

The available actions are:

- **Scan** - The Anti-Virus engine scans files of this type.
- **Block** - The Anti-Virus engine does not allow files of this type to pass through it.
- **Pass** - The Anti-Virus engine does not inspect files of this type and lets them pass through.

You cannot delete system defined file types. System defined file types are recognized by built-in signatures that cannot be edited. Manually defined file types are recognized by their extension and are supported through the web and mail protocols.

**To add a new file type:**

1. Click **New**.
   - The New File Type window opens.
2. Enter the information in these fields:
   - **Extension** - Enter the file extension.
   - **Action** - Block, pass or scan.
   - **Description** - You can optionally add a description.
3. Click **Apply**.

**To edit or change the action of a file type:**
1. Select the file type in the table.
2. Click **Edit**.
3. Make the necessary change.
4. Click **Apply**.

**Configuring the Anti-Spam Blade**

In the Threat Prevention > Anti-Spam Blade Control page you can activate the Anti-Spam engine to block or flag emails that are suspected to contain spam content.

On this page you can activate the blade to identify, block or flag such emails or set it to detect mode only and use the logs to understand if your system is experiencing spam attacks.

Check Point can identify spam emails by their source address (most spam emails) and also the email content itself. You can configure the system to simply flag emails with spam content instead of blocking them and then configure your internal email server to use this flag in order to decide how to handle them.

Flag is a common use case if you do not want to lose emails that are suspected of spam. The content of emails is inspected in the cloud and the appliance is notified how to handle the emails.

**To enable/disable the Anti-Spam blade:**
1. Select **On** or **Off**.
2. Click **Apply**.

**Note** - When the blade is managed by Cloud Services, a lock icon is shown. You cannot toggle between the on and off states. If you change other policy settings, the change is temporary. Any changes made locally will be overridden in the next synchronization between the gateway and Cloud Services.

**To configure the Anti-Spam engine to work in detect only mode:**
1. Select the **Detect-only mode** checkbox.
2. Click **Apply**.

In Detect-only mode only logs will appear and the blade will not block any emails.

**To configure the Anti-Spam Policy:**

The spam filter is always based on inspecting the senders' source address. This is a quick way to handle the majority of spam emails. In addition, you can configure to filter the rest of the spam emails by inspecting the email content. Make sure the **Email content** checkbox is selected. Select the action to perform on emails whose content was found to contain spam:

- **Block spam emails**
- **Flag spam email subject with X** - Replace X with manually defined text to add to the subject line for spam emails.
- **Flag spam email header** - This option identifies email as spam in the email message header.

Select the relevant **tracking option** - Log or Alert (shown as a highly important log).

**Configuring Anti-Spam Exceptions**

In the Threat Prevention > Anti-Spam Exceptions page you can configure:

- Safe senders (email addresses) and/or domains or IP addresses from which emails are not inspected.
- Specific senders and/or domains or IP addresses that Anti-Spam engine will block regardless of its own classification.

Blocking or allowing by senders requires the Anti-Spam engine to be configured to filter based on **Email content** in the Threat Prevention > Anti-Spam Blade Control page.
Note - IP address exceptions are ignored for POP3 traffic.

To add a new sender/domain/IP address to the Allow or Block list:
1. Click Add or New in the Allow or Block list.
2. Enter the IP address or Sender/Domain.
3. Click Apply.

To edit or delete a sender/domain/IP address from the Allow or Block list:
1. Select the relevant row in the Allow or Block list.
2. Click Edit or Delete. If the options are not visible, click the arrows next to the filter box.
Managing VPN

This section describes how to set up and manage Remote Access and Site to Site VPN.

Configuring the Remote Access Blade

In the VPN > Remote Access Blade Control page you can activate the device’s ability to establish secure encrypted connections between home desktops and laptops and the organization through the Internet.

Remote access requires the definition of users in the system with credentials and permissions for it can be set for specified users. It also requires the appliance to be accessible from the Internet.

There are numerous supported methods of remote access connection:

- Installing a VPN client on the home desktops or laptops.
- Browsing from home devices (using secure HTTPS) to the appliance and downloading a thin client when necessary. This method is known as SSL Network Extender.

It is highly recommended to work with remote access after configuring DDNS or a static IP Internet connection on the appliance. If you are not using a static IP, your appliance's IP address may vary according to your Internet Service Provider, DDNS lets home users connect to the organization by name and not IP address that may change. See Device > DDNS for more details.

To configure DDNS, click the DDNS link or the Internet link for static IP.

To enable or disable VPN Remote Access:

1. Select On or Off.
2. Click Apply.

Note - When the blade is managed by Cloud Services, a lock icon is shown. You cannot toggle between the on and off states. If you change other policy settings, the change is temporary. Any changes made locally will be overridden in the next synchronization between the gateway and Cloud Services.

To configure the default access policy into the organization through remote access:

1. Select or clear the Allow traffic from Remote Access users (by default) checkbox. When cleared, access from Remote Access users to resources in the organization must be defined for each resource using the Access Policy > Servers page or by manually defining access rules in the Access Policy > Firewall Policy page.
2. Select or clear the Log traffic from Remote Access users (by default) checkbox.
3. Click Apply.

To configure VPN remote access methods:

By default, Check Point VPN clients is enabled.

1. To connect through the Check Point Mobile VPN client (for smartphones and tablets), select the Mobile client checkbox.
2. To connect through SSL VPN, select the checkbox.
3. To connect through L2TP VPN client, select the checkbox. Click the L2TP Pre-Shared Key link to enter the pre-shared key and click OK.

To send users remote access usage instructions:

1. Click the How to connect link next to the relevant remote access method.
2. Click the E-mail these instructions to automatically open a pre-filled email that contains the instructions.
3. Click Close.

To change the Remote Access port settings:

If there is a conflict between the default remote access port (port 443) and a server using the same port, a message is shown. You must change the default remote access port if the Check Point VPN client, Mobile client, or SSL VPN remote access methods are enabled as they use port 443 by default.
1. Click the **Change port** link.
   The Remote Access Port Settings window opens.
2. In **Remote Access port**, enter a new port number.
3. Make sure **Reserve port 443 for port forwarding** is selected.
4. Click **Apply**.

---

**Configuring Remote Access Users**

In the **VPN > Remote Access Users** page you can configure remote access permissions for users and groups.

Users and user groups can be configured in other pages as well (**Users & Objects > Users**). This page is dedicated to those with remote access permissions. You can add through it:

- New local users
- New users groups
- Active Directory group
- Active Directory permissions
- RADIUS group

If no authentication servers are defined, click the **Active Directory / RADIUS** server link to define them.

Note that when **User Awareness** is turned off, there is no user identification based on Browser-Based Authentication and Active Directory Queries.

**To add a new local user with remote access permissions:**

1. Click **Add > New Local User**.
2. Enter the necessary details.
3. For temporary or guest users, click **Temporary user**.
   Enter the expiration date and time.
4. Do not clear the **Remote Access permissions** checkbox.
Click Apply. 
The user is added to the table on the page.

**To add a new local users group with remote access permissions:**
1. Click Add > New Users Group.
2. Enter the group name.
3. Do not clear the Remote Access permissions checkbox.
4. Select initial users to add to the group by clicking the relevant checkboxes from the user list or click New to create new users.
   
   You can see a summary of the group members above the user list. You can remove members by clicking the X next to the relevant user name.
5. Click Apply.
   
The group is added to the table on the page.

**To add remote access permissions to an existing Active Directory group:**
1. Click Add > Active Directory Group.
2. Enter the group name.
3. Do not clear the Remove Access permissions checkbox.
4. Select initial users to add to the group by clicking the relevant checkboxes from the user list or click New to create new users.
5. Click Apply.
   
The group is added to the table on the page.

**To add remote access permissions to all users in defined in an Active Directory:**
1. Click Edit Permissions or Add > Active Directory Permissions.
2. Select All users in Active Directory. With this option, it is not necessary to use the VPN > Remote Access Users page to select specific users.
   
   Note that most Active Directories contain a large list of users and you might not want to grant them all remote access permissions to your organization. Usually you will keep the Selected Active Directory user groups option.
3. Click Apply.
   
The Active Directory is added to the table on the page.

**To add remote access permissions for users defined in the RADIUS group:**
1. Click Add > RADIUS Group.
2. Select or clear the Enable RADIUS authentication for remote access users checkbox.
3. When selected, choose which users will be granted remote access permissions:
   - To allow all users defined in the RADIUS server to authenticate - Select All users defined on RADIUS server
   - Specific user groups defined in the RADIUS server - Select For specific RADIUS groups only and enter in the text field the names of the user groups separated by commas
   - To allow administrators with read-only permissions to authenticate - Select Read-only Administrators
4. Click Apply.
   
The RADIUS server or specific users from the RADIUS server are added to the table on the page.

**To edit a user or group:**
1. Select the user or group from the list.
2. Click Edit.
3. Make the relevant changes and click Apply.

**To delete a user or group:**
1. Select the user or group from the list.
2. Click Delete.
3. Click OK in the confirmation message.
The user or group is deleted.

**Configuring Remote Access Authentication Servers**

In the Authentication Servers page you can define and view different authentication servers where users can define both an external user database and the authentication method for users in that database.

You can define these types of authentication servers:

- **RADIUS server** - Define the details of a primary and secondary RADIUS server. The Check Point 1100 Appliance can connect to these servers and recognize users defined in them and authenticated by them.

- **Active Directory domain** - Define the details of the Active Directory domain that contains your organization's user information. The User Awareness feature can use these details to provide seamless recognition of users for logging purposes and user based policy configuration. This can be used for VPN remote access user authentication. When this is the case, additional configuration is necessary in the VPN > Remote Access Users page.

**To add a RADIUS server:**

1. Click **Configure**.
2. In the Primary tab, enter this information:
   - **IP address** - The IP address of the RADIUS server.
   - **Port** - The port number through which the RADIUS server communicates with clients. The default is 1812.
   - **Shared secret** - The secret (pre-shared information used for message "encryption") between the RADIUS server and the Check Point 1100 Appliance. You cannot use these characters when you enter a password or shared secret: `{ } [ ] ` ~ ` | ` `' ` "
     - **Show** - Displays the shared secret.
   - **Timeout** (seconds) - A timeout value in seconds for communication with the RADIUS server. The timeout default is 3 seconds.
3. Repeat step 2 for a Secondary RADIUS server if applicable.
   - **Note** - if you want to remove information you entered in IP address and shared secret, you can click **Clear**.
4. Click **Apply**.
   - The primary and secondary servers (if defined) are added to the RADIUS section on the page.

RADIUS servers can be used for:

- Defining a database of users with remote access privileges. Such users are both defined and authenticated by the RADIUS server.
- Defining administrators. See the Users & Objects > Administrators page.

**To edit a RADIUS server:**

1. Click the IP address link of the RADIUS server you want to edit.
2. Make the necessary changes.
3. Click **Apply**.
   - The changes are updated in the RADIUS server.

**To delete a RADIUS server:**

Click the **Remove** link next to the RADIUS server you want to delete.

The RADIUS server is deleted.

**To configure remote access permissions for users defined in the RADIUS server:**

1. Click **permissions for RADIUS users**.
2. Select or clear the **Enable RADIUS authentication for remote access users** checkbox.
3. When selected, choose which users will be granted remote access permissions:
   - **To allow all users defined in the RADIUS server to authenticate** - Select **All users defined on RADIUS server**
   - Specific user groups defined in the RADIUS server - Select **For specific RADIUS groups only** and enter in the text field the names of the user groups separated by commas.
• To allow administrators with Read-only permissions to authenticate - Select Read-only Administrators

4. Click Apply.

To add an Active Directory domain:

1. In the Active Directory section, click New.
   The Add new Domain window opens.
2. Enter this information:
   • Domain - The domain name.
   • IP address - The IP address of one of the domain controllers of your domain.
   • User name - The user must have administrator privileges to ease the configuration process and create a user based policy using the users defined in the Active Directory.
   • Password - The user's password. You cannot use these characters when you enter a password or shared secret: { } [ ] ` ~ | ' "
   • User DN - Click Discover for automatic discovery of the DN of the object that represents that user or enter the user DN manually. For example: CN=John James,OU=RnD,OU=Germany,O=Europe,DC=Acme,DC=com

3. Select Use user groups from specific branch only if you want to use only part of the user database defined in the Active Directory. Enter the branch in the Branch full DN in the text field.

4. Click Apply.

Once an Active Directory is defined, you can select it from the table and choose Edit or Delete when necessary.

When you edit, note that the Domain information is read-only and cannot be changed.

When you add a new Active Directory domain, you cannot create another object using an existing domain.

To configure remote access permissions for all users defined in Active Directory:

By default, users defined in the Active Directory are not given remote access permissions. Instead, in the VPN > Remote Access Users page all users defined locally or in Active Directories can be selected to be granted remote access permissions per user.

1. Click permissions for Active Directory users.

2. Select All users in the Active Directory. With this option, it is not necessary to go to the VPN > Remote Access Users page and select specific users.
   Note that most Active Directories contain a large list of users and you might not want to grant them all remote access permissions to your organization. Usually you will keep the Selected Active Directory user groups option and configure remote access permissions through VPN > Remote Access Users page.

3. Click Apply.

To change synchronization mode with the defined Active Directories:

1. Click Configure in the toolbar of the Active Directory table.

2. Select one of the options - Automatic synchronization or Manual synchronization. When Manual synchronization is selected, you will be able to sync the user database known to the appliance in all locations that this user database can be viewed. For example, the Users & Objects > Users page or the Source picker in the Firewall Rule Base in the Access Policy > Firewall Policy page.

3. Click Apply.

To edit an Active Directory:

1. Select the Active Directory from the list.
2. Click Edit.
3. Make the relevant changes and click Apply.
To delete an Active Directory:
1. Select the Active Directory from the list.
2. Click Delete.
3. Click OK in the confirmation message.
   The Active Directory is deleted.

   Note - This page is available from the VPN and Users & Objects tabs.

Configuring Advanced Remote Access Options

In the VPN > Remote Access Advanced page you can configure more advanced settings to determine VPN remote access users' behavior.

What is Office Mode?

Remote access VPN clients connect through a VPN tunnel from their homes to the appliance and from there they can gain access into the organization's resources.

The appliance assigns each remote access user an IP address from a specified network so that the traffic inside the organization is not aware that it originated from outside the organization.

This technology is called Office Mode and the network used for supplying the IP addresses is configurable.

To configure the Office Mode network:
1. Enter the Network address and Subnet Mask.
2. Click Apply. The default setting for office mode is 172.16.10.0/24.

To route all traffic from VPN remote access clients through the gateway:
1. Select the Route Internet traffic from connected clients through this gateway checkbox.
2. Click Apply.

Normally, only traffic from the VPN clients into the organization's encryption domain is encrypted and sent through the VPN tunnel to the gateway. Selecting the above checkbox causes all traffic from the VPN clients to be encrypted and sent to the gateway. Traffic to locations outside the organization will be enforced in this case by the outgoing access Policy. For more information, see Access Policy Firewall Blade Control and Policy pages.

   Note - This setting does not apply to traffic from SSL Network Extender clients.

To manually configure a local encryption domain for remote access users only:

The local encryption domain are the internal networks accessible by encrypted traffic from remote access VPN users. By default, the local encryption domain is determined automatically by the appliance. Networks behind LAN interfaces and trusted wireless networks are part of the local encryption domain.

Optionally, you can manually create a local encryption domain to be used by remote access users only instead. It is possible to configure a different manual local encryption domain for VPN remote access and VPN site to site. See VPN > Site to Site Blade Control page.

1. Click on the local encryption domain link: automatically according to topology or manually. The link shown is a reflection of what is currently configured.
2. Select Define local network topology manually.
3. Click Select to show the full list of available networks and choose the relevant checkboxes.
4. Click New if the existing list does not contain the networks you need. For information on creating a new network object, see the Users & Objects > Network Objects page.
5. Click Apply.
   The Remote Access Local Encryption Domain window opens and shows the services you selected.

DNS Servers

You can define up to three DNS servers for Remote Access clients. By default, the DNS Primary server is set to this gateway.
To use a different DNS Primary server:
1. Click Configure manually.
2. Clear the Remote access clients use this gateway as a DNS server when applicable checkbox.
3. Click Apply.
4. In the DNS Primary field, enter the IP address of a server to use as the DNS server.
5. Click Apply.

DNS Suffix
You can set a DNS suffix that the Remote Access clients’ devices will automatically use to attempt to resolve non-FQDN domains. By default, the suffix is automatically configured to take the DNS domain name configured in the DNS page.

To configure a manual DNS suffix:
1. Click Configure manually.
2. Clear the Remote access clients resolve host names using the same DNS domain name defined in the DNS page checkbox.
3. Click Apply.
4. In the DNS suffix field, enter the DNS domain name suffix to use.
5. Click Apply.

To configure the DNS suffix to be the same as the defined DNS domain name:
1. Click Configure automatically.
2. Select the Remote access clients resolve host names using the same DNS domain name defined in the DNS page checkbox.
3. Click Apply.
   The DNS suffix field shows the text "Same as DNS domain name".

Configuring the Site to Site VPN Blade
In the VPN > Site to Site Blade Control page you can activate the appliance’s ability to create VPN tunnels with remote sites. Site to Site VPN can connect two networks separated by the Internet through a secure encrypted VPN tunnel. This allows for seamless secure interaction between the two networks within the same organization even though they are physically distant from each other.

On this page you can activate the blade to allow site to site connectivity. You can view how many sites are already defined and configure basic access policy from the remote sites into the specific network accessible by this gateway.

The remote site can be accessible through another Check Point appliance (recommended) or a 3rd party VPN solution.

Once defined, access to the remote site is determined by the incoming/internal/VPN traffic Rule Base as seen in the Access Policy > Firewall Policy page. This is due to the fact that the remote site’s encryption domain is considered part of the organization even though traffic to it is technically outgoing to the Internet (since it is now VPN traffic).

To enable/disable the VPN Site to Site blade:
1. Select On or Off.
2. Click Apply.

Note - When the blade is managed by Cloud Services, a lock icon is shown. You cannot toggle between the on and off states. If you change other policy settings, the change is temporary. Any changes made locally will be overridden in the next synchronization between the gateway and Cloud Services.

A warning icon is shown if the blade is active but no VPN sites are defined. Click VPN Sites to add a VPN site or see how many VPN sites are defined. The full list of the sites is located in VPN > Site to Site VPN Sites.
To configure the default access policy from remote VPN sites:
1. Select or clear the **Allow traffic from remote sites (by default)** checkbox. It is not recommended to clear this checkbox, as the remote site is usually part of your organization.
2. Select or clear the **Log remote sites traffic (by default)** checkbox.
3. Click **Apply**.

To manually configure a local encryption domain:

The local encryption domain are the internal networks accessible by encrypted traffic from remote sites and networks, that traffic from them to remote sites is encrypted. By default, the local encryption domain is determined automatically by the appliance. Networks behind LAN interfaces and trusted wireless networks are part of the local encryption domain.

Optionally, you can manually create a local encryption domain instead.
1. Click the **automatically according to topology** link.
2. Select **Define local network topology manually**.
3. Click **Select** to show the full list of available networks and choose the relevant checkboxes.
4. Click **New** if the existing list does not contain the networks you need. For information on creating a new network object, see the Users & Objects > Network Objects page.
5. Click **Apply**.
The Site to Site Local Encryption Domain window opens and shows the services you selected.

---

**Configuring VPN Sites**

In the VPN > Site to Site VPN Sites page you can configure remote VPN sites. For more information on common configuration of site to site VPN, see VPN > Site to Site Blade Control.

When adding a new site you configure:
- Remote site details - Name, host or IP address, authentication method (preshared secret or certificate), and the Remote Site Encryption Domain
Appliance Configuration

- Encryption settings
  You can also configure advanced settings for the encryption method and certificate matching.

**To add a new VPN site:**

1. **Click New.**
   The New VPN Site window opens.

2. **Fill in the fields in the Remote Site tab:**
   - **Site name**
   - **Host name or IP Address** - When the remote VPN site is configured with DDNS, it is preferable to use its Host name.

   Select one of the authentication methods. It must match the authentication configured when configured this appliance as the other gateway's remote site.
   - **Preshared secret** - If you select this option, enter the same **password** as configured in the remote gateway and **confirm** it. You cannot use these characters when you enter a password or shared secret: `{ } [ ] ` ~ | '
   - **Certificate** - The gateway uses its own certificate to authenticate itself. For more information, see VPN > Internal Certificate.

   Select the remote site encryption domain. Configure here the conditions that when matched traffic will be encrypted and sent to this remote site.
   - **Define remote network topology manually** - Traffic is encrypted when the destination is included in the list below this option. Click **Select** to select the networks in the list below that represent the remote site's internal networks. Click **New** if you haven’t created such network objects already.
   - **Route all traffic through this site** - All traffic is encrypted and sent to this remote site. You cannot configure more than one remote site with this option.
   - **Encrypt according to routing table** - Select this option if you want traffic to be encrypted according to source or service as well as destination and if you are using dynamic routing. You are required to create a virtual tunnel interface (VTI) in the Device > Local Network page and associate it with this remote site. You can then create routing rules using this VTI. Traffic that matches these routing rules will be encrypted and routed to the remote site.
   - **Hidden behind external IP of the remote gateway** - Select this option if the remote site is behind NAT and traffic is only initiated from behind the remote site to this gateway. When you select this option it is not necessary to define an encryption domain.

3. Optionally you can change the default settings in the Encryption tab. There are three built in encryption settings' groups that can be used and only need to match in both this configuration and in the remote site.
   - **Default (most compatible)**
   - **VPN A** - According to RFC4308.
   - **VPN B** - According to RFC4308.
   - **Custom** - Optionally, you can select this option to manually decide which encryption method should be used.

4. Optionally you can change the default settings in the Advanced tab sections:
   **Settings**
   - Configure if the remote site is a Check Point gateway. This also enables configuration of permanent tunnels.
   - You can select to disable NAT for this site which is usually useful when your internal network contains a server.
   - There are two modes for IKE negotiation - main mode or aggressive mode. For IKE negotiation, main mode uses six packets and aggressive mode uses three packets. It is recommended to use main mode as it is more secure. By default, **Enable aggressive mode** is **not** selected and main mode is used. Enable aggressive mode only if it is necessary and the other side of the VPN tunnel does not support main mode.

   **IP Selection to Remote Site**
   Select one of these options that determine how this gateway connects to the remote site in order to establish a VPN tunnel:
   - **Configured host name or IP address** - Use the configured host name or IP address that is entered on the Remote Site tab.
- **Statically NATed IP** - Use the specified IP Address when the remote site is behind a static IP address.

**Certificate Matching**
- When using preshared secret this section is not relevant. When selecting certificate matching in the Remote Site tab, you first need to add the CA that signed the remote site’s certificate in the VPN > Certificates Trusted CAs page. In the Advanced tab, you can select to match the certificate to any known Trusted CA or a specific Trusted CA. You can also configure additional matching criteria on the certificate.

5. Click **Apply**.
   An initial tunnel test will begin with the remote site. If you haven’t configured it yet, click **Skip**. The VPN site is added to the table.

**To run a tunnel test with a remote site:**
Check Point uses a proprietary protocol to test if VPN tunnels are active. It supports any site-to-site VPN configuration. Tunnel testing requires two Security Gateways and uses UDP port 18234. Check Point tunnel testing protocol does not support 3rd party Security Gateways.

1. Select an existing site from the list.
2. Click **Test**.

**To edit a VPN site:**
1. Select the VPN site from the list.
2. Click **Edit**.
3. Make the relevant changes and click **Apply**.

**To delete a VPN site:**
1. Select the VPN site from the list.
2. Click **Delete**.
3. Click **OK** in the confirmation message.
   The VPN site is deleted.

**To disable or enable the VPN site:**
1. Select the VPN site from the list.
2. Click **Disable** or **Enable**.
   The VPN site is disabled or enabled accordingly.

**Viewing VPN Tunnels**
In the VPN Tunnels page you can see current VPN tunnels opened between this gateway and remote sites. Some sites are configured so tunnels are established only when necessary and some are configured with permanent tunnels. When the appliance is managed by Cloud Services, this table also shows the tunnels for the gateways in the community.

This page is commonly used to see the permanent tunnels. The table shows each tunnel’s details when there is an active VPN tunnel.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>Host name or IP address of the tunnel’s source gateway.</td>
</tr>
<tr>
<td>Site Name</td>
<td>Name of the VPN site name.</td>
</tr>
<tr>
<td>Peer Address</td>
<td>Host name or IP address of the tunnel’s destination gateway.</td>
</tr>
<tr>
<td>Community Name</td>
<td>If the gateways are part of a community configured by Cloud Services, this column shows the community name with which the tunnel is associated.</td>
</tr>
<tr>
<td>Status</td>
<td>VPN tunnel status status indication.</td>
</tr>
</tbody>
</table>
To filter the list:
In the **Type to filter** box, enter the filter criteria.
The list is filtered accordingly.

To refresh the list:
Click **Refresh** to manually refresh this page with updated tunnel information.

**Note** - This page is available from the VPN and Logs & Monitoring tabs.

### Managing Trusted CAs

In the **VPN > Certificates** Trusted CAs page you can add CAs used by remote sites’ certificates to enable certificate based site to site VPN. A certificate shown by the remote site must be signed by a CA that is trusted by the appliance.

This page also shows the built in Internal CA that by default creates the certificates for this appliance. It can also be used to sign remote sites’ certificates. You can also export the internal CA to add it to a remote site’s trusted CA list.

When Cloud Services is turned on and the appliance is configured by a Cloud Services Provider, the CA of the Cloud Services Provider is downloaded automatically to the appliance. The Cloud Services Provider CA is used by community members configured by Cloud Services. Note that if you turn Cloud Services off, the Cloud Services Provider CA is removed.

**Recommended configurations**

When using certificate based site to site VPN with only one remote site, it is recommended to export each site’s Internal CA and add it to the other site’s Trusted CA list.

When using certificate based site to site VPN with multiple remote sites, in a mesh configuration, it is recommended for all sites to use one CA to sign their internally used certificates on appliances that support creating signing requests. You must also add the same CA to all sites’ Trusted CAs list. That CA can either be an external CA service like Verisign (for a fee) or simply use this appliance’s Internal CA. See below how to use it to sign external requests.

**To add a trusted CA:**
1. Click **Add**.
2. Click Browse to upload a CA’s identifier file (a .CRT file).
3. A **CA name** is suggested, you can enter another name if preferred. Click **Preview CA details** to see further information from the .CRT file.
4. Click **Apply**. The CA is added to the Trusted CA list.

**To edit a trusted CA’s configuration:**
1. Select the CA from the list.
2. Click **Edit**. The Edit window opens.
3. Select the necessary options regarding CRL (Certificate Revocation List):
   - **Retrieve CRL from HTTP Server(s)** - HTTP can be used to access the CA for CRL retrieval. When cleared, this appliance will not attempt to validate the remote site’s certificate’s CRL.
   - **Cache CRL on the Security Gateway** - Select how often is a new updated CRL is retrieved.
     - **Fetch new CRL when expires** - Upon expiration of the CRL.
     - **Fetch new CRL every X hours** - Regardless of CRL expiration.
4. Click **Details** to see full CA details.
5. Click **Apply**.

**To delete a trusted CA:**
1. Select the trusted CA from the list and click **Delete**.
2. Click **Ok** in the confirmation message.

**To export the Internal CA (or other previously imported CAs):**
1. Select the Internal CA in the table.
2. Click **Export**. The Internal CA's identifier file is downloaded through your browser and is available to be imported to the remote site’s trusted CA list.

3. You can also export other trusted CAs you’ve added to the list if necessary by selecting them and clicking Export.

**To sign a remote site's certificate request by the Internal CA:**

1. Click **Sign a Request**. A file upload window opens.
2. Click **Browse** to upload the signing request file as created in the remote site. In third party appliances, make sure to look in its Administration Guide to see where signing requests are created.
   
   The file must be in a path accessible to the appliance. After clicking **OK**, in the file browsing window, the file is uploaded and if it is correctly formatted, it will be signed by the Internal CA and the **Download** button will become available.

3. Click **Download**. The signed certificate is downloaded through your browser and is available to be imported to the remote site's certificates list.

### Managing Installed Certificates

In the VPN > Certificates Installed Certificates page you can create and manage appliance certificates or upload a PKCS#12 (.p12, .pfx) file.

When Cloud Services is turned on and the appliance is configured by Cloud Services, the Cloud Services Provider certificate is downloaded automatically to the appliance. The Cloud Services Provider certificate is used by community members configured by Cloud Services. Note that if you turn Cloud Services off, the Cloud Services Provider certificate is removed.

These are the steps for creating a signed certificate:

1. Create a signing request.
2. Export the signed request (download the signing request from the appliance).
3. Send the signing request to the CA.
4. When you receive the signed certificate from the CA, upload it to the appliance.

**To create a new certificate to be signed by a CA:**

2. Enter a **Certificate name**.
3. In the **Subject DN** enter a distinguished name (e.g. CN=myGateway).
4. Optional - to add alternate names for the certificate, click **New**. Select the **Type** and enter the **Alternate name** and click **Apply**.
5. Click **Generate**.
   
   The new signing request is added to the table and the status shows "Waiting for signed certificate". Note that you cannot edit the request once it has been created.

**To export the signing request:**

Click **Export**.

**To upload the signed certificate when you receive the signed certificate from the CA:**

1. Select the signing request entry from the table.
2. Click **Upload Signed Certificate**.
3. Browse to the signed certificate file (*.crt).
4. Click **Complete**.
   
   The status of the installed certificate record changes from "Waiting for signed certificate" to "Verified".

**To upload a PKCS#12 (.p12, .pfx) file:**

1. Click **Upload P12 Certificate**.
2. Browse to the PKCS#12 file (*.p12 or *.pfx).
3. Edit the **Certificate name** if necessary.
4. Enter the certificate **password**.
5. Click **Apply**.
Managing Internal Certificates

In the VPN > Certificates Internal Certificate page you can view details of the internal certificate used by the appliance in site to site VPN. You can also view and reinitialize the certificate used by the internal CA that signed the certificate and can be used to sign external certificates.

When creating certificate based site to site VPN, once a certificate that is signed by the internal CA is used, the CA's certificate must be reinitialized when the Internet connection's IP addresses change. This page lets you do that.

To avoid constant reinitialization it is recommended to use the DDNS feature. See Device > DDNS. Once DDNS is configured, it is only necessary to reinitialize the certificate once. Changes in the DDNS feature configuration, will automatically by default reinitialize certificates.

To reinitialize certificates:
1. Click Reinitialize Certificates. The Reinitialize Certificates window is shown.
2. Normally, the device suggests its own host name (when DDNS is configured) or its external IP address. If you have multiple Internet connections configured, in load sharing mode, you may choose to manually enter an accessible IP address for this appliance. This is used by remote sites to access the internal CA and check for certificate revocation.
3. Click Apply.

To export internal CA certificate:
Click Export Internal CA Certificate to download the internal CA certificate.

To sign a remote site's certificate request by the Internal CA:
1. Click Sign a Request. A file upload window opens.
2. Click Browse to upload the signing request file as created in the remote site. In third party appliances, make sure to look in its Administration Guide to see where signing requests are created.
   The file must be in a path accessible to the appliance. After clicking OK, in the file browsing window, the file is uploaded and if it is correctly formatted, it will be signed by the Internal CA and the Download button will become available.
3. Click Download. The signed certificate is downloaded through your browser and is available to be imported to the remote site's certificates list.
Managing Users and Objects

This section describes how to set up and manage users (User Awareness, users, administrators, and authentication servers) and network resources.

**Working with User Awareness**

See Working with User Awareness (on page 61).

**Configuring Local Users and User Groups**

In the Users & Objects > Users page you can create local users and user groups. To use these objects in the Access Policy, make sure to activate User Awareness.

User objects are used to define the different terms under which users can operate. These include:

- The time frame during which users are allowed to access the network.
- If users can work remotely.

To add a new local user:

1. Click New > Local User.
2. Enter a User name, Password, and Comments (optional). You cannot use these characters when you enter a password or shared secret: { } [ ] ` ~ | ' "
3. For temporary or guest users, click Temporary user. Enter the expiration date and time.
4. To give the user remote access permissions, select Remote Access permissions.
5. Click Apply.

The user is added to the table on the page.

To add a new local users group with remote access permissions:

1. Click New > Users Group.
2. Enter a Group name.
3. To give the group remote access permissions, select Remote Access permissions.
4. Select initial users to add to the group by clicking the relevant checkboxes from the user list or click New to create new users.
   You can see a summary of the group members above the user list. You can remove members by clicking the X next to the relevant user name.
5. Click Apply.

The group is added to the table on the page.

To edit a user or group:

1. Select the user or group from the list.
2. Click Edit.
3. Make the relevant changes and click Apply.

To delete a user or group:

1. Select the user or group from the list.
2. Click Delete.
3. Click OK in the confirmation message.
4. The user or group is deleted.

**Configuring Local System Administrators**

See Configuring Local System Administrators (on page 43).
Managing Authentication Servers

In the Authentication Servers page you can define and view different authentication servers where users can define both an external user database and the authentication method for users in that database.

You can define these types of authentication servers:

- **RADIUS server** - Define the details of a primary and secondary RADIUS server. The Check Point 1100 Appliance can connect to these servers and recognize users defined in them and authenticated by them.

- **Active Directory domain** - Define the details of the Active Directory domain that contains your organization's user information. The User Awareness feature can use these details to provide seamless recognition of users for logging purposes and user based policy configuration. This can be used for VPN remote access user authentication. When this is the case, additional configuration is necessary in the VPN > Remote Access Users page.

**To add a RADIUS server:**

1. Click **Configure**.
2. In the Primary tab, enter this information:
   - **IP address** - The IP address of the RADIUS server.
   - **Port** - The port number through which the RADIUS server communicates with clients. The default is 1812.
   - **Shared secret** - The secret (pre-shared information used for message “encryption”) between the RADIUS server and the Check Point 1100 Appliance. You cannot use these characters when you enter a password or shared secret: { } [ ] ` ~ | ' "
     - **Show** - Displays the shared secret.
   - **Timeout (seconds)** - A timeout value in seconds for communication with the RADIUS server. The timeout default is 3 seconds.
3. Repeat step 2 for a Secondary RADIUS server if applicable.
   - **Note** - if you want to remove information you entered in IP address and shared secret, you can click **Clear**.
4. Click **Apply**.
   - The primary and secondary servers (if defined) are added to the RADIUS section on the page.

RADIUS servers can be used for:

- Defining a database of users with remote access privileges. Such users are both defined and authenticated by the RADIUS server.

- Defining administrators. See the Users & Objects > Administrators page.

**To edit a RADIUS server:**

1. Click the IP address link of the RADIUS server you want to edit.
2. Make the necessary changes.
3. Click **Apply**.
   - The changes are updated in the RADIUS server.

**To delete a RADIUS server:**

Click the **Remove** link next to the RADIUS server you want to delete.

The RADIUS server is deleted.

**To configure remote access permissions for users defined in the RADIUS server:**

1. Click **permissions for RADIUS users**.
2. Select or clear the **Enable RADIUS authentication for remote access users** checkbox.
3. When selected, choose which users will be granted remote access permissions:
   - To allow all users defined in the RADIUS server to authenticate - Select **All users defined on RADIUS server**
   - Specific user groups defined in the RADIUS server - Select **For specific RADIUS groups only** and enter in the text field the names of the user groups separated by commas.
   - To allow administrators with Read-only permissions to authenticate - Select **Read-only Administrators**
4. Click **Apply**.

**To add an Active Directory domain:**

1. In the Active Directory section, click **New**. The Add new Domain window opens.

2. Enter this information:
   - **Domain** - The domain name.
   - **IP address** - The IP address of one of the domain controllers of your domain.
   - **User name** - The user must have administrator privileges to ease the configuration process and create a user based policy using the users defined in the Active Directory.
   - **Password** - The user's password. You cannot use these characters when you enter a password or shared secret: { } [ ] ` ~ | '
   - **User DN** - Click **Discover** for automatic discovery of the DN of the object that represents that user or enter the user DN manually. For example: CN=John James,OU=RnD,OU=Germany,O=Europe,DC=Acme,DC=com

3. Select **Use user groups from specific branch only** if you want to use only part of the user database defined in the Active Directory. Enter the branch in the Branch full DN in the text field.

4. Click **Apply**.

Once an Active Directory is defined, you can select it from the table and choose **Edit** or **Delete** when necessary.

When you edit, note that the Domain information is read-only and cannot be changed.

When you add a new Active Directory domain, you cannot create another object using an existing domain.

**To configure remote access permissions for all users defined in Active Directory:**

By default, users defined in the Active Directory are not given remote access permissions. Instead, in the VPN > Remote Access Users page all users defined locally or in Active Directories can be selected to be granted remote access permissions per user.

1. Click **permissions for Active Directory users**.

2. Select **All users in the Active Directory**. With this option, it is not necessary to go to the VPN > Remote Access Users page and select specific users.

   Note that most Active Directories contain a large list of users and you might not want to grant them all remote access permissions to your organization. Usually you will keep the **Selected Active Directory user groups** option and configure remote access permissions through VPN > Remote Access Users page.

3. Click **Apply**.

**To change synchronization mode with the defined Active Directories:**

1. Click **Configure** in the toolbar of the Active Directory table.

2. Select one of the options - **Automatic synchronization** or **Manual synchronization**. When Manual synchronization is selected, you will be able to sync the user database known to the appliance in all locations that this user database can be viewed. For example, the Users & Objects > Users page or the Source picker in the Firewall Rule Base in the Access Policy > Firewall Policy page.

3. Click **Apply**.

**To edit an Active Directory:**

1. Select the Active Directory from the list.

2. Click **Edit**.

3. Make the relevant changes and click **Apply**.

**To delete an Active Directory:**

1. Select the Active Directory from the list.

2. Click **Delete**.

3. Click **OK** in the confirmation message. The Active Directory is deleted.
Managing Applications and URLs

In the Users & Objects > Applications & URLs page you can define application groups, custom applications, and view the full list of available applications. You can then use them in the access policy together with the applications and URLs that are in the Application Database. A custom application group lets you define multiple categories and/or sites to use in the access policy Rule Base.

To configure the access policy, click the applications default policy link or click the Applications Blade Control page link.

For more information about all built in applications and categories, click the Check Point AppWiki link at the top of the page.

What is a custom application?
Most applications are browser based. A custom application can be defined using a string or regular expression search on URLs.

What is a category?
Each URL is inspected by the Check Point Cloud using the URL Filtering blade and can be matched to one or more built in categories (for example, phishing sites, high bandwidth, gambling, or shopping, etc.).

The Application and Categories List
A list of applications and categories is shown according to a filter that is shown above the list. There are 4 filters:

- **Common** - Commonly used applications, custom applications, and categories.
- **Custom** - Only custom applications.
- **Categories** - Only categories.
- **All**

A tag icon is shown next to categories and dedicated application icons are shown next to applications.

In the Application Database, each application is assigned to one primary category based on its most defining aspect. It also has additional categories which are characteristics of the application. For example, Pinterest - its primary category is social networking and its additional categories are share photos and SSL protocol. If a category is in a rule, the rule matches all applications that are marked with the category.

If new applications are added to an additional category that is in the access policy Rule Base, the rule is updated automatically when the database is updated.

To search for a category or application:
1. Filter the list to show the required view.
2. Enter the text of the category of application in the Filter box.
   As you type, the list is filtered.

To create a custom URL:
1. Select New > URL.
2. Enter the URL.
3. Click **Apply**.
   You can use the URL in a rule.

To create a custom application:
1. Select New > Application.
2. Enter a name for the custom application.
3. Select a **Primary category** from the list.
4. Select All URLs are regular expressions if you want to use regular expressions instead of partial strings. Regular expressions use PCRE syntax (for example, to block www.malicioussite.com using a regular expression you can use `.*malicioussite\..com`)

5. Click New to add a partial string or regular expression that the appliance will detect in the URL and click OK.

6. Do step 5 to add more related strings or regular expressions. The custom application will be matched if one of the strings or expressions is found.

7. Click the Additional Categories tab to select more categories if necessary.

8. Click Apply.
   You can use the application in a rule.

**To create a custom applications group:**

2. Enter a Group name.
3. Select the applications and categories to add as group members. To filter the selection list by common, categories, custom, or all, click the link.
   The group members window shows a quick view of the selected items. You can quickly remove a selected item by clicking the x next to it.
4. If necessary, click New to add a custom application or URL to the list. For information on creating a custom application, see above.
5. Click Apply.
   You can use the custom application group in a rule.

**Managing System Services**

The Users & Objects > Services page lists the system services configured in the system. In this page you can add new services, edit services, and delete services.

You use service objects to easily define the different network protocols. Usually using IP protocol and ports (used by the TCP and UDP IP protocols).

These objects can be used to define your security policy, as well as policy based routing rules. Many service objects are predefined with the system and cannot be deleted. Those predefined “system services” represent the appliance’s ability to perform deep inspection on those services for connectivity and security reasons. The system services sometimes have additional configuration options.

**To create a new service:**

1. Click New.
2. In the Service tab, enter information in the fields that apply to the type of service you select. Note that not all fields may show:
   - **Name** - Enter the service’s name.
   - **Type** - Select the service type from the list:
     - TCP
     - UDP
     - ICMP - Choose this option if it is necessary to represent a specific option within the ICMP protocol. Note that this is an advanced option.
     - Other - Choose this option to represent any IP protocol other than TCP or UDP.
   - **Ports** - Enter the port(s) if you selected Type - TCP or UDP. Port numbers and/or ranges can be entered by separating with commas.
   - **IP Protocol** - Enter the IP protocol if you selected Type - Other.
   - **ICMP type** and **ICMP code** - Enter the ICMP type and code that you want the service object to represent as listed in RFC 792. This option is only relevant if you selected Type - ICMP.
   - **Comments** - Enter an optional comment.
   - **Disable inspection for this service** – Select this checkbox to disable deep inspection of traffic matching this service. This option is only available for built-in services.
3. In the Advanced tab, enter information in the fields that apply to the type of service you selected. Note that not all fields may show depending on the service type.
General

- **Session timeout (in seconds)** - Time in seconds before the session times out.
- **Use source port** - Select this option and enter a port number for the client side service. If specified, only those source port numbers will be accepted, dropped, or rejected when inspecting packets of this service. Otherwise, the source port is not inspected.
- **Accept replies** (relevant for non-TCP services) - When cleared, server to client packets are treated as a different connection.
- **Match** (a highly advanced option to be used only by Check Point Support)

Connection handling

- **Keep connections open after policy has been installed** - Even if they are not allowed under the new policy. If you change this setting, the change will not affect open connections, but only future connections.
- **Synchronize connections on cluster** - Enables state-synchronized High Availability or Load Sharing on a cluster. Of the services allowed by the Rule Base, only those with Synchronize connections on cluster will be synchronized as they pass through the cluster. By default, all new and existing services are synchronized.
- **Start synchronizing X seconds after the connection was initiated** - For TCP services, enable this option to delay telling Check Point 1100 Appliance about a connection so that the connection will only be synchronized if it still exists in X seconds after the connection is initiated. Some TCP services (HTTP for example) are characterized by connections with a very short duration. There is no point in synchronizing these connections because every synchronized connection consumes gateway resources, and the connection is likely to have finished by the time a failover occurs.

Aggressive aging

This feature can be configured from the Device > Advanced page. When the appliance is under load, older connections are removed from memory faster to make room for new connections.

- **Enable aggressive aging** - Select this option to manage connections table capacity and reduce gateway memory consumption to increase durability and stability.
- **Aggressive aging timeout (in seconds)** - Time in seconds before the session times out.

4. Click **Apply**.

To edit a service:

1. Select a service from the list.
2. Click **Edit**.
3. Make the necessary changes. Note that not all fields can be edited.
4. Click **Apply**.

To delete a service:

1. Select the service from the list. Note that you can only delete a user defined service.
2. Click **Delete**.
3. Click **Yes** in the confirmation message.

To filter for a specified service:

1. In the **Type to filter** box, enter the service name or part of it.
2. As you type, the list is filtered and shows matching results.

Built-in System Services

Some built-in services represent Check Points ability to perform deep inspection of the specific protocol. Such system services cannot be deleted. When editing them the ports which you configure decide when the deep inspection will occur and you can add or change default ports. Some system services have additional configuration which affect the way the deep inspection is performed.

- **HTTP** - The IPS settings tab lets you configure how and when HTTP deep inspection is performed. Select the relevant options.
- **FTP** - The Firewall settings tab lets you configure how the firewall automatically detects data connections. You can select one of these options:
  - Any - The Firewall detects and allows FTP data connections in all modes.
  - Active - The Firewall detects and allows FTP data connections in active mode only.
Appliance Configuration

- Passive - The Firewall detects and allows FTP data connections in passive mode only.
- PPTP_TCP - The IPS settings tab lets you configure how PPTP deep inspection is performed.
  - Action on malformed connections - Choose the action to perform on connections when parsing has failed.
  - Tracking - Choose the type of log to issue when parsing fails.
  - Enforce strict PPTP parsing - Select this to enforce strict adherence to the protocol.
- SNMP - The Firewall settings tab lets you configure the firewall to enforce a read-only mode in SNMP.
- SSH - The Firewall settings tab lets you configure the firewall to block older version of the SSH protocol (1.x).
- Citrix - The Firewall settings tab lets you configure which protocol to support on the configured ports. The default port 1494 is commonly used by two different protocols - Winframe or Citrix ICA.

Managing Service Groups

The Users & Objects > Service Groups page lists the service groups defined in the system. In this page you can add new service groups, and edit or delete existing service groups.

Defining service groups is the recommended way to configure the security policy. If the security policy is configured using groups and not specific objects, then it is much easier to maintain the policy over time. If you decide to add new service objects to the system, you only need to add them to the relevant groups and your policy will automatically apply to them.

There are built in service groups for common services.

Some of these service groups also contain additional configuration for the inspection of the specific protocol.

To create a new service group:
1. Click New.
   The New Service Group window opens.
2. Enter a Name for the group and Comments (optional).
3. Click Select to show the full list of available services and choose the relevant checkboxes.
4. Click New if the existing list does not contain the services you need. For information on creating a new service object, see the Users & Objects > Services page.
5. Click Apply.
   The New Service Group window opens and shows the services you selected.
6. You can also click New from the New Service Group window.
7. To remove a service object from the group list, select it and click Remove.
8. Click Apply.
   The service group is added to the list of groups.

To edit a service group:
1. Select a group from the list.
2. Click Edit.
3. Make the necessary changes.
4. Click Apply.

To delete a service group:
1. Select the group from the list. Note that you can only delete a user defined service group.
2. Click Delete.
3. Click Yes in the confirmation message.

To filter for a specified service group:
1. In the Type to filter box, enter the service group name or part of it.
2. As you type, the list is filtered and shows matching results.
Built-in System Service Groups

Some built-in service groups represent Check Points ability to perform deep inspection of a specific protocol. Such system service groups cannot be deleted. They contain a list of built in services which you can restore if you edit the content of such groups by clicking Reset.

Some system service groups have additional configuration which affect the way the deep inspection is performed.

- **DNS** - The Firewall settings tab lets you configure NAT support over DNS. Note that choosing this option will affect the performance of DNS traffic and is normally not needed unless your organization uses both NAT and an internal DNS server accessible to the Internet. The IPS settings tab lets you configure how and when DNS deep inspection is performed. Select the relevant options.

Managing Network Objects

The Users & Objects > Network Objects page lists the network objects defined in the system. In this page you can add new network objects, edit network objects, and delete network objects. In most cases, the most common use for these objects is to define a security policy and exceptions to it. These objects can be used as hosts for the internal DNS service and their IP addresses can be configured as fixed for the internal DHCP service.

These are the available network object types:

- **Single IP** - A network object that represents a device with a single IP address.
- **IP Range** - A network object that represents a range of IP addresses.
- **Network** - A network object that represents a network.

To create a Single IP network object:

1. Click **New**.
2. In **Type**, select **Single IP**.
3. Enter an **IP address** and **Object name**.
4. Select or clear these options as necessary:
   - **Allow DNS server to resolve this object name** - When the gateway is the DNS server for your internal networks the name of the server/network object will be translated to its IP address if this option is selected.
   - **Exclude from DHCP service** - The internal DHCP service will not distribute the configured IP address of this server/network object to anyone.
     - **Reserve IP address in DHCP service for MAC** - The internal DHCP service will distribute the configured IP address only to this server/network object according to its MAC address.
     - **Enter the MAC address** - This is required for IP reservation. When you create the object from the Active Computers page, the MAC address is detected automatically.
5. Click **Apply**.

To create an IP Range network object:

1. Click **New**.
2. In **Type**, select **IP Range**.
3. In the **Start IP** and **End IP** fields, enter the IP addresses that represent the start of the IP range and end of the IP range.
4. Enter the **Object name**.
5. Select or clear this option as necessary:
   - **Exclude from DHCP service** - The internal DHCP service will not distribute the configured IP range to anyone.
6. Click **Apply**.

To create a Network type network object:

1. Click **New**.
2. In **Type**, select **Network**.
3. Enter a **Network address** and **Subnet mask**.
4. Enter the **Object name**.
5. Click **Apply**.

**To edit a network object:**
1. Select a network object from the list.
2. Click **Edit**.
3. Make the necessary changes.
4. Click **Apply**.

**To delete a network object:**
1. Select the network object from the list.
2. Click **Delete**.
3. Click **Yes** in the confirmation message.

**To filter for a specified network object:**
1. In the **Type to filter** box, enter the name of the network object or part of it.
2. As you type, the list is filtered and shows matching results.

**Managing Network Object Groups**

The Users & Objects > Network Object Groups page lists the network object groups defined in the system. In this page you can add new network object groups, edit network object groups, and delete network object groups. Defining groups for network objects is the recommended way to configure the security policy. If the security policy is configured using groups and not specific objects, then it is much easier to maintain the policy over time. When new network objects are added to the system, you only need to add them to the relevant groups and your policy will automatically apply to them.

**To create a new network object group:**
1. Click **New**.
   - The New Network Object Group window opens.
2. Enter a **Name** for the group and **Comments** (optional).
3. Click **Select** to show the full list of available network objects and choose the relevant checkboxes.
4. Click **New** if the existing list does not contain the network object you need. For information on creating a new network object, see the Users & Objects > Network Objects page.
5. Click **Apply**.
   - The New Network Object Group window opens and shows the services you selected.
6. You can also click **New** from the New Network Object Group window.
7. To remove a network object from the group list, select it and click **Remove**.
8. Click **Apply**.
   - The network object group is added to the list of groups.

**To edit a network object group:**
1. Select a group from the list.
2. Click **Edit**.
3. Make the necessary changes.
4. Click **Apply**.

**To delete a network object group:**
1. Select the group from the list.
2. Click **Delete**.
3. Click **Yes** in the confirmation message.

**To filter for a specified service group:**
1. In the **Type to filter** box, enter the network object group name or part of it.
2. As you type, the list is filtered and shows matching results.
Logs and Monitoring

This section describes the security and system logs. It also describes various monitoring tools.

Viewing Security Logs

The Logs & Monitoring > Security Logs page shows the last 100 log records. To load more records, continue scrolling down the page. The log table is automatically refreshed.

To search for a security log:

Enter your query in the Enter search query box. You can only search one field at a time (AND/OR operators are not supported).

Use this syntax:

- `<IP_address>`
- `<column_name>:<value>`

For example:

- `203.0.113.64`
- `action:drop`
- `source port:22`

For more details, click Query Syntax in the table header.

To see the security log record:

1. Select a log entry from the list.
2. Click View Details or double-click the entry. The log record opens.

To refresh the security log data:

Click the refresh icon 🔄.

To stop local logging:

When necessary, you can stop local logging for better performance. This removes the overhead of creating and maintaining logs. No new logs are generated until you set the resume option.

1. Select Options > Stop local logging.
2. To resume, select Options > Resume local logging.
Storing Logs

Logs can be stored locally on an SD card or on an externally managed log server (see Log Servers page). When you insert an SD card, it mounts automatically and then local logs are saved to it. Before ejecting an SD card, make sure to unmount it. Select Options > Eject SD card safely.

Viewing System Logs

The Logs & Monitoring > System Logs page shows up to 500 systems logs generated from the appliance at all levels except for the debug level. These logs should be used mainly for troubleshooting purposes and can also give the administrator notifications for events which occurred on the appliance.

These are the system logs types:

- **Info** - Informative logs such as policy change information, administrator login details, and DHCP requests.
- **Notice** - Notification logs such as changes made by administrators, date, and time changes.
- **Warning** - Logs that show a connectivity or possible configuration failure. The problem is not critical but requires your attention.
- **Error** - System errors that alert you to the fact that a specific feature is not working. This can be due to misconfiguration or connectivity loss which requires the attention of your Internet Service Provider.

To download the full log file:
1. Click Download Full Log File.
2. Click Open or Save.

To save a snapshot of the system logs to the flash disk:
1. Select Save a snapshot of system logs to flash.
2. Enter a minute value for the interval. The default is 180 minutes (3 hours). The minimum value is 30 minutes.
3. Click Apply.

This is an effort to keep system logs persistent across boot, but not 100% guaranteed.

To refresh the system logs list:

Click Refresh. The list is refreshed.
To clear the log list:
1. Click Clear Logs.
2. Click OK in the confirmation message.

### Configuring External Log Servers

The Logs & Monitoring > Log Servers page lets you configure external log servers for security and system logs when necessary for additional logging storage.

**Note** - You cannot configure external log servers when Cloud Services is turned on.

### External Security Log Server

You can use an external Check Point log server that is managed by a Security Management Server for storing additional logs.

Before you can configure an external Check Point log server from this page in the WebUI, make sure to do these steps:

- Identify the Log Server you want to send logs to
- Identify the Security Management Server that manages the Log Server
- Open SmartDashboard on this Security Management Server
- Run the Security Gateway wizard to define and create a Security Gateway object that represents this Check Point 1100 Appliance with the these details:
  - In the General Properties window, select:
    - Gateway platform - 1100 Appliances
    - Gateway IP address - Dynamic IP address
  - In the Trusted Communication window, from Gateway Identifier select MAC address or First to connect.
For more information on using the Security Gateway wizard for object definition, see the Check Point 1100 Appliance Centrally Managed Administration Guide (http://supportcontent.checkpoint.com/documentation_download?ID=23999).

- Install the database on the Security Management Server and other related objects.

To configure an external security log server:
2. Enter the Management Server IP address. This IP address is used only for establishing trusted communication between the Check Point 1100 Appliance and the Security Management Server.
3. In SIC name, enter the SIC name of the log server object that was defined in SmartDashboard. You can get this name by using one of these methods:
   - Open GuiDBedit on the Security Management Server - From the Tables tab, expand Table > Network Objects > locate the log server object > sic_name.
   - Run this CLI command on the log server (using SSH or running the command on the physical machine):
     
     ```
     $CPDIR/bin/cpprod_util CPPROD_GetValue SIC MySICname 0
     ```
     
     Copy the SIC name value and paste it into the SIC name field on this page.
4. In Set SIC One-time Password, enter the same password that was entered for the Security Management Server and then enter it again in the Confirm SIC One-time Password field. You cannot use these characters when you enter a password or shared secret: { } [ ] ` ~ | ' "
5. Select the Log server uses different IP address checkbox if the log server is not located on the Security Management Server.
6. Click Connect. A notification message is shown.

Important - After successful configuration of the external log server, any changes you make in the WebUI configuration on this page requires reinitialization of the SIC in SmartDashboard. If you do not reinitialize SIC in SmartDashboard, connectivity to the log server can fail.

External System Log Server Configuration (for system logs)

To configure an external System Log server:
2. Select the Send system logs to an external System Log Server checkbox.
3. Enter the IP address.
4. Enter the Port.
5. Click **Apply**.

**To edit the external System Log server:**
1. Click the server’s IP address.
2. Edit the necessary information.
3. Click **Apply**.

**To delete the external System Log server:**
Click **Delete**.
The server is deleted.

---

**Managing Active Computers in Internal Networks**

See Managing Active Computers in Internal Networks (on page 24).

**Viewing VPN Tunnels**

See Viewing VPN Tunnels (on page 87).

**Viewing Active Connections**

The Logs & Monitoring > Connections page shows a list of all active connections.
The list shows these fields:
- Protocol
- Source Address
- Source Port
- Destination Address
- Destination Port

**To filter the list:**
In the **Type to filter** box, enter the filter criteria.
The list is filtered accordingly.

**To refresh the list:**
Click the **Refresh** link.

---

**Viewing 3D Monitoring Reports**

The 3D Monitoring page shows statistics from the last hour for security events and network analysis. Each time you enter this page, the latest data is shown. You can click **Refresh** to update information.

To see sample reports, click **View Demo**. Charts show the top 5 items for different aspects of security events and bandwidth consumption (user usage, applications used, sites visited, and threats such as viruses).

Click the **Graph** icon or the **Table** icon to toggle between different layouts of the information for each of the sections.

Click the **Information** icon to show more details for the statistics shown in the section. Then hover over the specific data to see its description.

You can click **Print** to open a print-friendly view of the reports.

---

*Note* - This page is available from the Home and Logs & Monitoring tabs.
Using System Tools
See Using System Tools (on page 26).

Viewing Security Reports in the Reports Dashboard
The Reports Dashboard page shows different network and security reports by time frame (hourly, daily, weekly, and monthly). There are two elements that influence report generation:

- Rounding off of time
- System uptime

Rounding Off of Time
The times shown in generated reports are rounded down:

- For hourly reports - At one minute intervals. For example, if you generate a report at 10:15:45 AM, the report represents data from 9:15 to 10:15 AM.
- For daily reports - At hourly intervals. For example, if you generate a report at 10:15 AM, the report represents data from the last 24 hours ending at 10:00 AM of the current day.
- For weekly reports - At two hour intervals, starting with 00:00, 02:00, 04:00, 06:00 and so on. For example, if you generate a report at 09:55 AM, the report represents data from the last week ending at 08:00 AM of the current day.
- For monthly reports - At four hour intervals, starting with 00:00, 04:00, 08:00, 12:00 and so on. For example, if you generate a report at 11:15 AM, the report represents data from the last month ending at 08:00 AM of the current day.

System Uptime
In the first 24 hour cycle after an appliance starts up, the system adds another time interval to the delta of the next applicable report interval.

For example, for weekly reports that are generated at pair hour intervals, the appliance requires 2 more hours plus the delta for the first applicable pair hour.

- For an appliance that started at 00:00 AM - The first weekly report is generated at 04:00 AM. The total of 4 hours derives from the delta of the first applicable pair hour which is 02:00 and the added 2 hours. The total wait is 4 hours.
- For an appliance that started at 01:59 AM - The first weekly report is generated at 04:00 AM. The generated time derives from the delta of the first applicable pair hour which is 02:00 and the added 2 hours. The total wait is 2 hours.

Therefore, the generation of reports after starting up an appliance will be possible:

- For hourly reports - 2-3 minutes from startup.
- For daily reports - 1-2 hours from startup.
- For weekly reports - 2-4 hours from startup.
- For monthly reports - 4-8 hours from startup.

Note - Only the last generated report for each report type is saved in the appliance. When you generate a new report, you override the last saved report for the specified type.

To generate a report:
Click Generate or Regenerate (if a report already exists).

The date and time link shows the date and time of the report generation. You can click the link to see the report.
Note - This page is available from the Home and Logs & Monitoring tabs.

**Viewing an Hourly Report**

The Logs & Monitoring > Hourly Report shows the security events and statistics for the hour that precedes the generated report date and time. If some blades are not activated, a message is shown at the top of the page. You can click the links to activate the blades so that their data will not be missing from the generated report.

The top line shows the security events summary for:

- **High Risk Applications** - Shows the number of potentially risky applications that were accessed.
- **Intrusions & Attacks** - Shows the number of intrusions and attacks that were detected by the IPS blade.
- **Viruses** - Shows the number of viruses identified.

The table of contents contains links to the report sections. Click a link to go directly to the selected section.

Each show section shows a detailed graph, table and descriptions.

To generate a report, click **Generate** or **Regenerate** (if a report already exists).

To see sample reports, click **View Demo**. Charts show the top 5 items for different aspects of security events and bandwidth consumption (user usage, applications used, sites visited, and threats such as viruses).

You can click **Print** to open a print-friendly view of the report.

**Viewing a Daily Report**

The Logs & Monitoring > Daily Report shows the security events and statistics for the 24 hours that precede the generated report date and time. If some blades are not activated, a message is shown at the top of the page. You can click the links to activate the blades so that their data will not be missing from the generated report.

The top line shows the security events summary for:

- **High Risk Applications** - Shows the number of potentially risky applications that were accessed.
- **Intrusions & Attacks** - Shows the number of intrusions and attacks that were detected by the IPS blade.
- **Viruses** - Shows the number of viruses identified.

The table of contents contains links to the report sections. Click a link to go directly to the selected section.

Each show section shows a detailed graph, table and descriptions.

To generate a report, click **Generate** or **Regenerate** (if a report already exists).

To see sample reports, click **View Demo**. Charts show the top 5 items for different aspects of security events and bandwidth consumption (user usage, applications used, sites visited, and threats such as viruses).

You can click **Print** to open a print-friendly view of the report.

**Viewing a Weekly Report**

The Logs & Monitoring > Weekly Report shows the security events and statistics for the week that precedes the generated report date and time. If some blades are not activated, a message is shown at the top of the page. You can click the links to activate the blades so that their data will not be missing from the generated report.

The top line shows the security events summary for:

- **High Risk Applications** - Shows the number of potentially risky applications that were accessed.
- **Intrusions & Attacks** - Shows the number of intrusions and attacks that were detected by the IPS blade.
- **Viruses** - Shows the number of viruses identified.

The table of contents contains links to the report sections. Click a link to go directly to the selected section. Each show section shows a detailed graph, table and descriptions.

To generate a report, click **Generate** or **Regenerate** (if a report already exists).

To see sample reports, click **View Demo**. Charts show the top 5 items for different aspects of security events and bandwidth consumption (user usage, applications used, sites visited, and threats such as viruses).

You can click **Print** to open a print-friendly view of the report.

### Viewing a Monthly Report

The Logs & Monitoring > Monthly Report shows the security events and statistics for the month that precedes the generated report date and time. If some blades are not activated, a message is shown at the top of the page. You can click the links to activate the blades so that their data will not be missing from the generated report.

The top line shows the security events summary for:

- **High Risk Applications** - Shows the number of potentially risky applications that were accessed.
- **Intrusions & Attacks** - Shows the number of intrusions and attacks that were detected by the IPS blade.
- **Viruses** - Shows the number of viruses identified.

The table of contents contains links to the report sections. Click a link to go directly to the selected section. Each show section shows a detailed graph, table and descriptions.

To generate a report, click **Generate** or **Regenerate** (if a report already exists).

To see sample reports, click **View Demo**. Charts show the top 5 items for different aspects of security events and bandwidth consumption (user usage, applications used, sites visited, and threats such as viruses).

You can click **Print** to open a print-friendly view of the report.
Upgrade Using a USB Drive

This section explains how you can upgrade the appliance with a USB drive without a console connection to the appliance. For more information, see Upgrade Using Boot Loader (on page 110).

Installing a new firmware image from a USB drive

Check Point releases new firmware images every so often. You can reburn the appliance using the image file and a USB drive. Note that you can also upgrade using the WebUI, in which case you will not lose your previous settings if the new image supports it. When you reburn a new image with a USB drive, the appliance deletes your previous settings and creates a new factory default image to which the appliance can return to.

To upgrade to a new firmware image from a USB drive:

1. Disconnect the Check Point 1100 Appliance from the power source.
2. Place the firmware image file on a USB drive, in the top folder. The firmware image file is recognized by its name so do not rename it.
3. Make sure the top folder of the USB drive does not contain any previous Boot loader or Firmware images (u-boot*.bin files or fw1*.img files).
4. Connect the USB drive to one of the USB ports on the Check Point 1100 Appliance. If the operation does not succeed, this may be due to the fact that the USB port does not recognize all USB drives. Some USB drives also use a different file system and those are not supported.
5. Connect the appliance to the power source. The appropriate USB LED will light and blink several times as it recognizes the file and uploads it to the appliance. The LED turns off once the file uploads. This takes several seconds.
   If the file is valid, all LAN LEDs will start to blink to show progress. Every other LED blinks at a different speed. The LAN LEDs blink in orange and green (Link LEDs blink orange and Activity LEDs blink green).
   Upon successful installation all LAN LEDs will turn solid green and the appliance awaits your input.
6. Remove the USB drive and disconnect the appliance from the power source.
7. Reconnect the appliance to the power source. Allow the appliance to boot successfully. The first boot after an image reburn takes more time than a normal boot. Wait patiently for the Notice LED to stop blinking (this indicates that the boot is complete).
   As this operation has removed your previous settings please refer to the Getting Started Guide and reconfigure your appliance with the First Time Configuration Wizard.

Note - When you upgrade with a USB drive, you also replace the saved factory defaults image of the appliance as this method reburns the appliance. For more information, see Upgrade.
Installing a new Boot-Loader from a USB drive

Check Point releases new Boot Loader rarely. This usually comes together with a new image. To upgrade to a new U-Boot or Firmware image requires booting the appliance.

To replace Boot-Loader (usually done before you upgrade to the new image, if one exists):

1. Disconnect your Check Point 1100 Appliance from the power source.
2. Place the Boot loader file on a USB drive, in the top folder. The Boot loader file is recognized by its name so do not rename it.
3. Make sure the top folder of the USB drive does not contain any previous Boot loader or Firmware images (u-boot*.bin files or fw1*.img files).
4. Connect the USB drive to your Check Point 1100 Appliance, to one of the USB ports. If the operation does not succeed, this may be due to the fact that the USB port does not recognize all USB drives. Some USB drives also use a different file system and those are not supported.
5. Connect the appliance to the power source. The appropriate USB LED will light and blink several times as it recognizes the file and uploads it to the appliance. The LED turns off once the file uploads. This takes several seconds.
   If the file is valid, all LAN LEDs will start to blink to show progress. Every other LED blinks at a different speed. The LAN LEDs blink in orange and green (Link LEDs blink orange and Activity LEDs blink green).
   Upon successful installation all LAN LEDs will turn solid green and the appliance awaits your input.
6. Remove the USB drive and disconnect the appliance from the power source.
7. If you need to install a new firmware image, refer to the firmware image installation section before reconnecting the appliance to the power source.

Boot Loader

The Gaia Embedded Boot Menu shows during boot and is available by pressing Ctrl+C while the appliance is booting if you have a console connection. The menu contains the available options.

1. Start in normal Mode
2. Start in debug Mode
3. Start in maintenance Mode
4. Restore to Factory Defaults (local)
5. Install/Update Image/Boot-Loader from Network
6. Install/Update Image from USB
7. Install/Update Boot-Loader from USB
8. Restart Boot-Loader
9. Install DSL Firmware / Upload preset configuration file

Please enter your selection:

When you are in Boot Loader, all interfaces are down and you can only activate them for options that require connectivity. At this point Check Point’s services are not active.

Options 1-3 start the appliance.

- Normal mode is the default boot mode for the appliance.
- Debug mode boot gives printouts of processes that are initialized during boot.
- Maintenance mode boots the machine and gives access only to the file system (network interfaces, Check Point processes and the appliance’s services are down).

   Note - During normal/debug boot, if there is an error and the appliance cannot boot properly, it reverts to maintenance mode and the Power LED turns solid red.

Options 4-5 are explained in the subsequent sections.

Options 6-7 let you manually choose a specific file from a USB drive and install/update an image or a new boot loader. Once you choose the file and it is downloaded onto the appliance the rest of the procedure is the same as in Upgrade Using a USB Drive (on page 108).

Option 8 restarts the appliance.
Option 9 installs new firmware for the DSL modem (supported in DSL models only) or upload a preset configuration file.

Upgrade Using Boot Loader

To upgrade the Check Point 1100 Appliance using U-boot (boot loader):

1. Connect to the appliance with a console connection (use the serial console connection on the back panel of the appliance), boot the appliance and press Ctrl+C. The Gaia Embedded Boot Menu is shown.
2. Press 5 to select Install/Update Image/Boot-Loader from Network.
3. You are asked if you want to manually load the image from a TFTP server, or if you want to use automatic mode with a bootp server.
4. If you choose manual mode, you are asked to fill in the IP of the Check Point 1100 Appliance, the IP of the TFTP server, and the image name.
5. If you choose automatic mode, the procedure starts automatically to search for the bootp server.
6. While in menu mode, pressing Ctrl+C again returns you to the Boot Loader menu.

   During the upgrade, all LAN Link and Activity LEDs blink orange and green alternately to indicate progress. This takes up to a few minutes.

   Upon successful completion all LAN Link and Activity will light in green, and the appliance waits for you to either press a key or to manually reboot (pull the power cable out and put it back in). Error in the upgrade process is indicated by all LAN Link and Activity LEDs blinking red.
Restoring Factory Defaults

The Check Point 1100 Appliance contains a default factory image.

When the appliance is turned on for the first time, it loads with the default image.

As part of a troubleshooting process, you can restore the Check Point 1100 Appliance to its factory default settings if necessary.

You can restore a Check Point 1100 Appliance to the factory default image with the WebUI, Boot Loader or a button on the back panel.

⚠️ Important - When you restore factory defaults, you delete all information on the appliance and it is necessary to run the First Time Configuration Wizard.

To restore factory defaults with the WebUI:
1. In the Check Point 1100 Appliance WebUI, click Device > System Operations. The System Operations pane opens.
2. In the Appliance section, click Factory Defaults.
3. In the pop-up window that opens, click OK.
4. While factory defaults are being restored, all LAN Link and Activity LEDs blink orange and green alternately to show progress.
   This takes some minutes. When this completes, the appliance reboots automatically.

To restore factory defaults with the button on the back panel:
1. Press the Factory defaults button with a pin and hold it for at least 3 seconds.
2. When the Power and Notice LEDs are lit red, release the button. The appliance reboots itself and starts to restore factory defaults immediately.
3. While factory defaults are being restored, all LAN Link and Activity LEDs blink orange and green alternately to show progress.
   This takes some few minutes. When this completes, the appliance reboots automatically.

To restore the Check Point 1100 Appliance to its default factory configuration using U-boot (boot loader):
1. Connect to the appliance with a console connection (using the serial console connection on the back panel of the appliance).
2. Boot the appliance and press Ctrl-C.
   The Gaia Embedded Boot Menu is shown.
   Welcome to Gaia Embedded Boot Menu:
   1. Start in normal Mode
   2. Start in debug Mode
   3. Start in maintenance Mode
   4. Restore to Factory Defaults (local)
   5. Install/Update Image/Boot-Loader from Network
   6. Install/Update Image from USB
   7. Install/Update Boot-Loader from USB
   8. Restart Boot-Loader
   Please enter your selection :
3. Enter 4 to select Restore to Factory Defaults (local).
4. When you are prompted: "Are you sure? (y/n)" choose y to continue and restore the appliance to its factory defaults settings.
   While factory defaults are being restored, all LAN Link and Activity LEDs will blink orange and green alternately to indicate progress. This will take up to a few minutes. Upon completion, the appliance will boot automatically.
## Front Panel

### Wireless Network + ADSL Model

<table>
<thead>
<tr>
<th>Key</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Express Card</td>
<td>Express card slot that is used for cellular modems in Express Card form factor.</td>
</tr>
</tbody>
</table>
| 2   | USB1 port | USB1 port that is used for:  
- Cellular and analog modems.  
- Reinstalling the appliance with new firmware.  
- Running a first-time configuration script. |
| 3   | Power LED | Green when the appliance is turned on. |
| 4   | Notice LED |  
- Blinking green during boot.  
- Red when the appliance has a resource problem such as memory shortage. |
| 5   | LAN1 - LAN8, DMZ, WAN LEDs | Link Indicator  
- Orange when the port speed is 1000 Mbps.  
- Green when the port speed is 100 Mbps.  
- Not lit when the port speed is 10 Mbps.  
Activity Indicator  
- Blinking green when encountering traffic. |
|     | DSL LED | Link Indicator  
- Green when an ADSL connection is established.  
- Blinking green when establishing an ADSL connection.  
- Not lit when an ADSL connection is not established.  
Activity Indicator  
- Blinking green when encountering traffic.  
- Not lit when the ADSL line is idle.  
(Only in the Wireless Network + ADSL model) |
| 6   | Internet LED |  
- Green when connected to the Internet.  
- Blinking red when the Internet connection is configured but fails to connect. |
|     | WLAN LED | Blinking green when encountering traffic.  
(Only in Wireless Network and Wireless Network + ADSL models) |
|     | USB1, USB2 LEDs | Orange when a USB device is connected. |
Back Panel

### Wireless Network + ADSL Model

<table>
<thead>
<tr>
<th>Key</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANT1 and ANT2</td>
<td>Ports for attaching wireless network antennas. (Only in Wireless Network and Wireless Network + ADSL models)</td>
</tr>
<tr>
<td>2</td>
<td>Power outlet</td>
<td>Connects to the power supply unit's cable.</td>
</tr>
<tr>
<td>3</td>
<td>Reboot button</td>
<td>Lets you forcibly reboot the appliance. The button is recessed into the appliance chassis to prevent accidental reboot. The appliance reboots immediately after you press the button.</td>
</tr>
<tr>
<td>4</td>
<td>LAN1 - LAN8 ports</td>
<td>Built in Ethernet ports.</td>
</tr>
<tr>
<td></td>
<td>LAN2/SYNC port</td>
<td>In a cluster configuration, you must connect a cable between this port on both appliances that take part in the cluster. You can configure the cluster sync port to a port other than LAN2.</td>
</tr>
<tr>
<td>5</td>
<td>DMZ and WAN ports</td>
<td>Built in Ethernet ports.</td>
</tr>
<tr>
<td>6</td>
<td>USB2 port</td>
<td>Second USB port. Same functionality as the USB1 port on the Front Panel.</td>
</tr>
<tr>
<td>7</td>
<td>Console port</td>
<td>Serial connection configured to 115200 bps by default. You can also use this port to connect an analog modem.</td>
</tr>
<tr>
<td>8</td>
<td>Factory Defaults button</td>
<td>Lets you restore the appliance to its factory defaults. The button is recessed into the appliance chassis to prevent accidental restoring of factory default settings. See Restoring Factory Defaults (on page 111).</td>
</tr>
<tr>
<td>9</td>
<td>ADSL port</td>
<td>Port for attaching ADSL cable. (Only in Wireless Network + ADSL model)</td>
</tr>
</tbody>
</table>
Index

A
Adding or Editing an SNMP v3 User • 50
Advanced - Creating and Editing NAT Rules • 68
Advanced Configuration • 108
Advanced IPS Configuration • 73
Appliance Configuration • 17

B
Back Panel • 113
Backing Up the System • 42
Backup, Restore, Upgrade, and Other System Operations • 40
Boot Loader • 109

C
Check Point 1100 Appliance Overview • 8
Common Configuration Scenarios • 10
Configuring a Cluster • 15
Configuring a Guest Network • 11
Configuring a Hotspot • 37
Configuring Administrator Access • 44
Configuring Advanced Remote Access Options • 83
Configuring Advanced Settings • 47
Configuring Anti-Spam Exceptions • 76
Configuring Anti-Virus Exceptions • 75
Configuring Cloud Services • 10, 22
Configuring DDNS Account Details • 46
Configuring External Log Servers • 102
Configuring High Availability • 47
Configuring Internet Connectivity • 28
Configuring IPS Exceptions • 72
Configuring Local System Administrators • 43, 91
Configuring Local Users and User Groups • 91
Configuring QoS • 15
Configuring Remote Access Authentication Servers • 81
Configuring Remote Access Users • 79
Configuring Remote Access VPN • 11
Configuring Site to Site VPN with a Certificate • 13
Configuring Site to Site VPN with a Preshared Secret • 13
Configuring SNMP Trap Receivers • 51
Configuring SNMP Traps • 51
Configuring the Anti-Spam Blade • 76
Configuring the Anti-Virus Blade • 74
Configuring the DNS Server • 39
Configuring the Firewall Access Policy and Blade • 52
Configuring the IPS Blade • 70
Configuring the Local Network • 33
Configuring the Proxy Server • 40
Configuring the Quality of Service (QoS) - Bandwidth Control Blade • 63
Configuring the Remote Access Blade • 78
Configuring the Routing Table • 38
Configuring the Site to Site VPN Blade • 84
Configuring VPN • 11
Configuring VPN Sites • 85
Configuring Wireless Network Settings • 30
Connecting the Cables • 9
Controlling and Monitoring Software Blades • 19

D
Defining NAT • 66
Defining NAT Server Objects • 68
Defining Server Objects • 59

E
Enabling VoIP Traffic • 16

F
Front Panel • 112

I
Important Information • 3
Installation • 9
Introduction • 8
Introduction to the WebUI Application • 18

L
Logs and Monitoring • 100

M
Managing Active Computers in Internal Networks • 24, 104
Managing Applications and URLs • 94
Managing Authentication Servers • 92
Managing Date and Time Settings • 46
Managing Device Details • 46
Managing Installed Certificates • 89
Managing Internal Certificates • 90
Managing Licenses • 45
Managing Network Object Groups • 99
Managing Network Objects • 98
Managing Service Groups • 97
Managing SNMP • 49
Managing SNMP Traps • 50
Managing System Services • 95
Managing the Access Policy • 52
Managing the Device • 28
Managing Threat Prevention • 70
Managing Trusted CAs • 88
Managing Users and Objects • 91
Managing VPN • 78

R
Restoring Factory Defaults • 111

S
Setting Actions for File Types • 75
Setting the Management Mode • 20
Setting Up the Check Point 1100 Appliance • 9

T
The Home Tab • 19

U
Upgrade Using a USB Drive • 108
Upgrade Using Boot Loader • 110
Using System Tools • 26, 47, 105
Using the Software Upgrade Wizard • 42

V
Viewing 3D Monitoring Reports • 24, 104
Viewing a Daily Report • 106
Viewing a Monthly Report • 107
Viewing a Weekly Report • 106
Viewing Active Connections • 104
Viewing an Hourly Report • 106
Viewing Security Logs • 100
Viewing Security Reports in the Reports Dashboard • 25, 105
Viewing System Information • 19
Viewing System Logs • 101
Viewing the Protections List • 72
Viewing the Site Map • 24
Viewing VPN Tunnels • 87, 104

W
Welcome • 8
Working with the Firewall Access Policy • 55
Working with the QoS Policy • 64
Working with User Awareness • 61, 91