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=23999)
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>
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<th>Date</th>
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<tr>
<td>25 August 2014</td>
<td>Administrator access changes updated in Configuring Local System Administrators (on page 72) and Configuring Administrator Access (on page 73)</td>
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<tr>
<td>25 February 2014</td>
<td>Added an option to set VLAN on DMZ/WAN interfaces (&quot;Configuring Internet Connectivity&quot; on page 58)</td>
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<td></td>
<td>Added a Disable inspection option (&quot;Managing System Services&quot; on page 76)</td>
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<td></td>
<td>Added a Hotspot exceptions feature (&quot;Configuring a Hotspot&quot; on page 66)</td>
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<td></td>
<td>Added list of characters not allowed for use in various password/shared secret fields</td>
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<td></td>
<td>Added options to override central management's URL policy (&quot;Managing URLs Lists&quot; on page 79)</td>
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<tr>
<td></td>
<td>Improved formatting and document layout</td>
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<td></td>
<td>Updated SNMP section (&quot;Managing SNMP&quot; on page 85)</td>
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<td>Added a read-only administrator option (&quot;Configuring Local System Administrators&quot; on page 72)</td>
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<tr>
<td>1 August 2013</td>
<td>Updated Restoring Factory Defaults (on page 93)</td>
</tr>
<tr>
<td></td>
<td>Updated USB port information in Front Panel (on page 94)</td>
</tr>
<tr>
<td>1 July 2013</td>
<td>Changes in document layout and formatting</td>
</tr>
<tr>
<td>5 May 2013</td>
<td>First release of this document</td>
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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 Centrally Managed Administration Guide).
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Chapter 1

Introduction

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Review these documents before doing the procedures in this guide:

- Known limitations (http://supportcontent.checkpoint.com/solutions?id=sk90342)

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.

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, providing independent, modular and centrally managed security building blocks. Software Blades can be quickly enabled and configured into a solution based on specific security needs.

Check Point 1100 Appliance runs an embedded version of the Gaia operating system. It includes core configuration elements such as clish interface, SNMPv2/3 and routing stack implementations. In addition to the Gaia features, Embedded Gaia contains support for built-in network switches, wireless networks, 3G Internet connectivity, multiple Internet connections (more than 2) in High Availability or Load Sharing mode, Policy Based Routing, DDNS support, and quick deployment (with USB).

For a comparison between Embedded Gaia and Gaia, see sk92741 (http://supportcontent.checkpoint.com/solutions?id=sk92741).
While Check Point 1100 Appliance is typically a branch office device, it also has local management capabilities. You can set the appliance to be centrally managed by a remote Security Management Server or locally managed using a Web user interface (WebUI). This can be useful in some Enterprise scenarios. For example:

- The appliance is first deployed in local mode and then it is switched to central management mode.
- The appliance is locally managed and also managed from a remote Security Management Server as an externally managed gateway.

This guide describes all aspects that apply to central management mode. For more information on local management, see the 1100 Appliance Locally Managed Administration Guide.

**Deployment Types**

There are two types of centrally managed deployments:

- **Small-scale deployment** - Where you configure between 1 and 25 Check Point 1100 Appliance gateways using SmartDashboard. Then you can manage device settings from SmartProvisioning.

- **Large-scale deployment** - Where you configure over 25 Check Point 1100 Appliance gateways using a SmartLSM profile and SmartProvisioning or a configuration file that is stored on a USB drive ("Deploying from a USB Drive" on page 44).

For both deployment types, you must configure objects and other elements in SmartDashboard and in SmartProvisioning.

**Deployment Prerequisites**

To manage the Check Point 1100 Appliance in a centrally managed deployment, you must install a Security Management Server and SmartConsole clients that operate with Check Point 1100 Appliance.

The Security Management Server versions that operate with Check Point 1100 Appliance are versions R75.46, R76 and higher.

For installation instructions, see the version’s release notes (http://www.checkpoint.com/cp1100).

After installing the SmartConsole clients you can define the Check Point 1100 Appliance object in SmartDashboard (in small-scale deployments) or create a SmartLSM profile (in large-scale deployments) and prepare the security policy.
Chapter 2

Small-scale Deployment Installation

In This Section:

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This chapter contains procedures for defining a gateway or a gateway cluster. Do the procedures that match your requirements, then install the policy.

Small-scale Deployment Workflow

This is the suggested workflow for small-scale deployments:

1. Create the necessary gateway or cluster objects for your appliances in SmartDashboard.
2. Install the Security Policy in SmartDashboard.
3. Configure the corresponding appliances using the First Time Wizard. Alternatively, you can use a USB drive to quickly configure many appliances without using the First Time Wizard. For more details, see Deploying from a USB Drive (on page 44).
4. Manage the appliance settings in SmartProvisioning for the gateway or cluster objects.

Defining a Gateway Object

You can use SmartDashboard creation wizard to define a Check Point 1100 Appliance before or after configuration of the appliance on site. There are two options to define a gateway object:

**Management First** - Where you define the gateway object in SmartDashboard before you configure and set up the actual appliance on site. This is commonly used for remotely deployed appliances or appliances that connect to the Security Management Server with a dynamic IP (e.g. assigned by a DHCP server or an ISP), as the IP is not known at the time of the configuration of the object in SmartDashboard. You can prepare a policy that the appliance will pull when it is configured.

**Gateway First** – Where you configure and set up the Check Point 1100 Appliance first. It will then try to communicate with the Security Management Server (if this is configured) at 1 hour intervals. If connectivity with the gateway is possible during object creation in SmartDashboard, the wizard can retrieve data from the gateway (such as topology), and then help in configuration.

If an R75.46 or R76 Security Management Server is offline and not connected to the Internet, see sk92732 (http://supportcontent.checkpoint.com/solutions?id=sk92732) for instructions on how to add the 1100 Appliances object type to SmartConsole for these versions.

To define a single gateway object:

1. Log in to SmartDashboard using your Security Management credentials.
2. From the Network Objects tree, right click Check Point and select Security Gateway. The Check Point Security Gateway Creation window opens.
3. Select Wizard Mode. The wizard opens to General Properties.
4. Type a name for the Check Point 1100 Appliance object and make sure that the gateway platform is set to 1100 Appliances.
5. Select the **Platform Type** that matches your appliance model (Wired, ADSL, Wireless, or Wireless + ADSL).

6. Select one of the following options for getting the gateway's IP address:
   - **Static IP address** - enter the IPv4 address of the appliance. Note that if the Check Point 1100 Appliance has not yet been set up and defined, the **Resolve from Name** option does not work at this point.
   - **Dynamic IP address** (e.g. assigned by DHCP server)

   ![Gateway Properties](image)

   Click **Next**.

7. If you specified a static IP address, the Authentication and Trusted Communication sections show (if you specified a dynamic IP address, go to step 7).
   a) In the Authentication section, select one of the options:
      - **Initiate trusted communication securely by using a one-time password** - the one-time password is used to authenticate communication between the Security Gateway 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 one-time password you define for the appliance in the First Time Configuration Wizard

      - **Initiate trusted communication without authentication (less secure)** - select this option only if you are sure that there is no risk of imposture (for example, when in a lab setting).

   b) In the Trusted Communication section, select one of the initialization options:
      - **Initiate trusted communication automatically when the Gateway connects to the Security Management server for the first time** - trust will be established when the Gateway will connect for the first time.
- **Initiate trusted communication now** and click **Connect**. A status window appears. Use this option only if you have already set up the appliance.

The Certificate state field displays the current certificate status. Click **Next** and go to step 8.

8. If you specified a dynamic IP address, the Gateway Identifier and Authentication sections show.
   a) Select one of the identifiers:
      - **Gateway name** – enter the same name that you will give the appliance during its initial configuration.
      - **MAC address** – enter the MAC address that is on the sticker on the appliance or on the box.
      - **First to connect** – means that this Gateway will be the next appliance to connect.
   b) In the Authentication section, select one of the options:
      - **Initiate trusted communication securely by using a one-time password** - the one-time password is used to authenticate communication between the Security Gateway 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 one-time password you define for the appliance in the First Time Configuration Wizard

      - **Initiate trusted communication without authentication (less secure)** - select this option only if you are sure there is no risk of malicious behavior (for example, when in a lab setting).
Click **Next**.

9. In the Blade Activation page, select the security and software blades that you want to activate and configure.

To configure blades now:

a) Make sure that the **Activate and configure software blades now** option is selected.

b) Select the check boxes next to the blades you want to activate and configure.

To configure blades later:

- Select the **Activate and configure software blades later option**. Do this later by editing the object from the Network Objects tree.

Click **Next**.

10. If you selected to activate and configure software blades now, configure the required options:

- **For NAT**, the **Hide internal networks behind the Gateway's external IP** checkbox is selected by default. Clear it, if you do not want to use this feature.

- **For QoS**: Set the inbound and outbound bandwidth rates.

- **For IPSec VPN**: Make sure that the VPN community has been predefined. If it is a star community, Check Point 1100 Appliance is added as a satellite gateway.
  
  - Select a VPN community that the Gateway participates in from the **Participate in a site to site community** list.

- **For IPS**:
  
  - Select a profile from the **Assign IPS Profile** list or click **Manage** to create/edit an IPS profile.

- **For Identity Awareness**:
  
  - Complete the wizard pages that open to define the Identity Awareness acquisition sources. In the Active Directory Servers page of the wizard, make sure to select only AD servers that your gateway works with.
  
  To configure acquisition sources at a later time, click **Cancel** in the wizard. After you define the Check Point 1100 Appliance object, you can configure Identity Awareness acquisition sources by editing the Check Point 1100 Appliance object.
- For Application Control, URL Filtering, Anti-Spam and Email Security, and Traditional Anti-Virus, there are no other settings to configure.

![Image](image.png)

Click **Next**.

11. If you selected IPSEC VPN, configure VPN Encryption Domain settings.
   - To hide the VPN domain, select **Hide VPN domain behind this gateway's external IP**.
     
     The VPN domain contains network objects behind this gateway. Instead of defining the network topology behind this gateway, it is possible to use this option, which sets the VPN domain to be this gateway's external IP address. This option is only applicable if you chose to hide all internal networks behind this gateway's external IP (see gateway's NAT settings). All outgoing traffic from networks behind this gateway to other sites that participate in VPN community will be encrypted (including replies, of course).

     **Note** - If you choose this option, connections that are initiated from other sites that are directed to hosts behind this gateway will **not be encrypted**. If you require access to hosts behind this gateway, either choose other options (define VPN topology) or, if possible, make sure all traffic from other sites is directed to this gateway's external IP and define corresponding NAT port-forwarding rules, such as: Translate the destination of incoming HTTP connections that are directed to this gateway’s external IP to the IP address of a web server behind this gateway.

   - To create a new VPN domain group, go to step 12.
   - To select a predefined VPN domain, go to step 13.

12. To create a new VPN domain group:
   a) Make sure that the **Create a new VPN domain** option is selected.
   b) In the **Name** field, enter a name for the group.
   c) From the **Available objects** list, select the applicable object(s) and click the Add button. The objects are added to the VPN domain members list.
   d) If necessary, create a new object by pressing **New**.

13. To select a predefined VPN domain:
   a) Choose the **Select an existing VPN domain** option.
b) From the **VPN Domain** list, select the domain.

Click **Next**.

14. In the Installation Wizard Completion page, you see a summary of the configuration parameters you set and can do further actions.
   - Select **Edit Gateway properties for further configuration** to configure the Security Gateway. When you click **Finish**, the General Properties window of the newly defined object opens.

---

**Defining a Gateway Cluster Object**

A Check Point 1100 Appliance security gateway cluster is a group of 2 members each representing a separate Check Point 1100 Appliance on which High Availability software has been installed. ClusterXL is the Check Point clustering solution. Third party OPSEC Certified clustering products are not supported.

**High Availability**

High Availability allows organizations to maintain a connection when there is a failure in a cluster member. Only one machine is active (Active/Standby operation) in this configuration. Load sharing is not supported on this appliance.

**Prerequisites**

**General overview of the process** - During Cluster configuration only a "Gateway First" installation path is supported. Therefore, the gateways must be configured first using their actual IPs. Only afterwards should...
the cluster object be created in SmartDashboard or SmartProvisioning, and the following policy installation from the Security Management Server will alert the gateways to the fact that they are configured as cluster members.

Before you define a Check Point 1100 Appliance cluster:

- Make sure you have defined all of the network interfaces in use for each of the Check Point 1100 Appliance gateways. The interfaces must be defined within the same subnet. To verify definitions, access the WebUI of the appliance.

The following is only required in order to work with the Cluster Wizard in SmartDashboard:

- Make sure a cable is connected between the two LAN2/SYNC ports of both appliances. You do not need to assign them IPs as they will be created automatically later. If you do assign them, make sure the LAN2/SYNC interfaces use the same subnet. You can use a different SYNC interface other than LAN2. Refer to sk52500 (http://supportcontent.checkpoint.com/solutions?id=sk52500) for details (you will be able to use the Cluster Wizard in SmartDashboard but you will need to make further adjustments to the cluster object before policy installation).

- The Cluster Wizard assumes that the WAN interface will be part of the cluster. Make sure the WAN interfaces in each of the gateways are configured with a static IP of a matching subnet.

- When configuring the appliances that will be used in the cluster, make sure to set both of the appliances with the same one-time password used for authenticating and establishing trusted communication. Without this you will not be able to use the Cluster Wizard in SmartDashboard, and you will need to create the cluster object using Classic Mode. Trusted communication without authentication is not supported on Check Point 1100 Appliance cluster members.

Creating a Cluster for New Gateways

To create a cluster for new gateways:

- Set up and configure the Check Point 1100 Appliance Gateways.
- Create and configure the cluster object in SmartDashboard that represents the gateways.

Configuring the Check Point 1100 Appliance Gateways

Full instructions on setting up and connecting the Check Point 1100 Appliance appear in the Check Point 1100 Appliance Getting Started Guide. Below is the general workflow:

1. Connect your computer to the Check Point 1100 Appliance on its LAN1 interface.
2. Configure your computer to obtain an IP address automatically.
3. Launch your Web browser, and connect to http://my.firewall

   Note - When you configure two Check Point 1100 Appliance gateways from your web browser, do so by connecting only one to a power source, configuring it according to the below instructions and then disconnecting it from the power source. Then do the same for the second appliance and reboot it at the end. If you do not follow these instructions, you will not be able to use the http://my.firewall URL correctly and you will need to connect using the gateway’s actual IP address (which is initially 192.168.1.1 on LAN1 before configuring it otherwise with the First Time Wizard).

   After you configure and connect both appliances to a power source, install a policy and renew the dynamic IP of the computer. You can then use http://my.firewall to access the active member of the cluster.

4. Follow the steps for configuring the Check Point 1100 Appliance with the First Time Configuration Wizard (http://supportcontent.checkpoint.com/documentation_download?ID=22711).
5. On the appliance's local network, configure the cluster SYNC interface on the same subnet as the SYNC interface of the second cluster member (use a cross Ethernet cable for SYNC interface connection).
Note - When you use the SmartDashboard cluster wizard, the LAN2 interface serves as the SYNCH interface between cluster members. You do not have to configure an IP on LAN2 at any stage of the gateway side configuration. If you do not configure them, LAN2 SYNCH interfaces are automatically set to 10.231.149.1 and 10.231.149.2. To set a different SYNCH interface (not LAN2), refer to sk52500 (http://supportcontent.checkpoint.com/solutions?id=sk52500).

Remember the one-time password. You will need it to configure the cluster in SmartDashboard. It must be the same on both clusters.

IP addresses need to be configured on both cluster members before you open SmartDashboard and run the Cluster configuration wizard. If you want to configure IPs in interfaces other than WAN and LAN1, do so in each gateway’s WebUI application with the Internet/Local Network pages. Make sure that for each interface that needs to be part of the cluster you configure an IP in the same subnet as the second cluster member.

Configuring the Cluster Object in SmartDashboard

To create a cluster for two new Check Point 1100 Appliance gateways, use the SmartDashboard Check Point 1100 Appliance Cluster wizard.

1. Log in to SmartDashboard using your Security Management credentials.
2. From the Network Objects tree, right click Check Point and select Security Cluster > Small Office Appliance. The Check Point Security Gateway Cluster Creation dialog box opens.
3. Select Wizard Mode. The wizard opens to General Properties.
4. Type a name for the Check Point 1100 Appliance cluster.
5. Click Next. The wizard opens to Cluster Members.
6. In the First Member and Second Member sections, enter a Member name and Member IP address for each of the members.

Note that you can clear the Define the second cluster member now check box if you want to complete the wizard definitions for the first member only so that you can check that communication and connectivity is in order.
7. Enter and confirm the **One-time password** that is used for establishing initial trust. Once established, trust is based on security certificates. This password must be identical to the same one-time password defined for both members (the same one-time password must be defined for both members in their corresponding appliances' First Time Configuration Wizard or WebUI).

8. Click **Next**. The wizard opens to Cluster Interface Configuration. See the section ("Cluster Interface Configuration" on page 19) for details.

   ![Cluster Members Configuration](image)

   **Note** - The Cluster Wizard in SmartDashboard assumes the common scenario of High Availability on the WAN interface. When configuring the WAN interface, you will not be able to disable High Availability on the WAN interface (other configurations can be configured later by editing the Cluster object).

   If the WAN interface was not defined, edit the Cluster object in SmartDashboard following the wizard and choose a correct main IP for the cluster object (this IP is used for example in VPN as one of the Link selection options).
9. Enter a virtual **IP Address** and **Net Mask** for the cluster. The virtual IP will be applied in the next policy installation.

10. Click **Next**.

11. To enable High Availability on the interface, select the **Enable High Availability on <name> interface** checkbox, where <name> shows the network interface defined in the Check Point 1100 Appliance.

12. When High Availability is selected, enter a virtual **IP Address** and **Net Mask** for the cluster. The virtual IP will be applied in the next policy installation.

13. Click **Next**.

14. Repeat steps 12 - 14 for each defined interface.

15. Upon completion, click **Finish** or select **Edit Cluster in Advanced mode** to further configure the cluster.
Cluster Interface Configuration

In this window, you define whether a network interface on the Check Point 1100 Appliance participates in the security gateway cluster. This window appears for each of the network interfaces that have been configured in the Check Point 1100 Appliance. The total number of interfaces configured for the gateway appears in the window title. For example, if 3 interfaces have been configured for the gateway, a total of 3 windows will require configuration. The first window will display (1 of 3 interfaces). The name of the interface you are currently configuring appears in the Interface column.

Each network interface (on both members) has a unique IP address. If High Availability is enabled on the interface, then the cluster itself requires an additional unique virtual IP address. This IP address is visible to the network and ensures that failover events are transparent to all hosts in the network.

When High Availability is not enabled, the interface is considered not-monitored private (i.e. it is not cluster related).

You can configure High Availability for all network interfaces except for the WAN interface. By default, the WAN interface is always part of the cluster. If you do not want the WAN interface to participate in the cluster, you can edit this setting by double-clicking on the Check Point 1100 Appliance security gateway cluster object, and selecting Topology node > Edit Topology.

If the WAN interface was not defined, edit the Cluster object in SmartDashboard following the wizard and choose a correct main IP for the cluster object (this IP is used for example in VPN as one of the Link selection options).

The graphic breadcrumb depiction at the top of the window shows you the interface you are currently configuring. You do not configure the LAN2 interface as it is automatically configured by the wizard and is used exclusively for the SYNC interface. Make sure a cable is connected between the two LAN2/SYNC ports of both appliances.

The graphic depiction at the bottom of the page indicates whether the interface is set for High Availability or not. When you configure High Availability, the physical IPs of both members meet at a point indicated by the cluster’s virtual IP address.

To configure other, more advanced options for interfaces, click “Edit Cluster in Advanced mode” at the end of the wizard, edit the topology of the cluster and make the necessary adjustments.
Converting an Existing Check Point 1100 Appliance to a Cluster

Do the following procedures to allow an existing Check Point 1100 Appliance to become part of a cluster.

Note - The procedures require some downtime.

Terms used:
- **1100GW** - represents the existing Check Point 1100 Appliance gateway object that has already established trust and has an installed policy.
- **1100Cluster** - represents the new Check Point 1100 Appliance cluster object that you will create.
- **1100GW_2** - represents the new cluster member object that will join the existing gateway.

Configure the New Appliance
Configure the new appliance 1100GW_2 with the First Time Configuration Wizard:
1. Make sure to set the actual IP addresses that you want to use and not the virtual IP addresses that you will use later (as used by the existing gateway 1100GW).
2. The default switch configuration is not supported in a cluster configuration. In the event that you did not change this setting (clear the Enable switch on LAN ports checkbox), it will be automatically removed during the cluster's first policy installation. However, it is more secure to remove the switch configuration before initial policy installation.
3. The LAN2 port is used for cluster synchronization. You must configure it with an IP address that is in the same network as the other cluster member. It is recommended to assign a static IP address for the sync interface.
4. Do not fetch the policy from the Security Management Server.

Create and Configure the Cluster in SmartDashboard
1. Create a new Check Point 1100 Appliance cluster using the wizard. Define its IP address as the IP used by the existing gateway 1100GW.
2. Define the first member with 1100GW_2's IP address.
   - Important - Do not define the second member using the wizard.
3. Establish trusted communication and then define the various IP addresses of the clustered interfaces. Use the existing gateway 1100GW IP address as the virtual IP of the cluster where needed.
4. At the end of the wizard, select the Edit the cluster in Advanced Mode checkbox.
5. In Advanced Mode, copy all the relevant configuration settings from the 1100GW to the cluster object.

Reconfigure the Existing Check Point 1100 Appliance
1. Go to the 1100GW and connect to it using the WebUI.
2. Reconfigure the IP addresses of the clustered interfaces with the actual IP addresses that will be used by the gateway as a member of the cluster.
   - Important - Downtime starts.

Configure the Cluster in SmartDashboard
1. Change the main IP and the IPs that appear in the topology table of the 1100GW object.
2. Install policy on 1100Cluster.
   - Important - Downtime ends. At this point, the cluster contains only one member, 1100GW_2.
3. Edit the 1100Cluster object. Go to Cluster Members tab > Add > Add existing gateway.
4. If **1100GW** does not show in the list, press Help and make sure **1100GW** doesn’t match any of the categories that prevent it from being added to a cluster.

   **Note** - You can use the information on this Help page to determine if there are any configuration settings you might want to copy to the new **1100Cluster** object.

5. Edit the topology of the **1100Cluster** object. Click **Topology > Get Topology** under the new **1100GW** object. Make corrections if needed.

6. Install policy on **1100Cluster**.

### Viewing Cluster Status in the WebUI

After you complete policy installation on the Check Point 1100 Appliance gateway and the gateway works as a cluster member, you can view cluster status in the WebUI application (Device > High Availability).

![Cluster Status in WebUI](image)

### Creating the Security Policy

#### Working with Security Zone Objects

A security zone object is a logical object that represents the network behind a specified interface. For example, an InternalZone object represents the internal network IPs that lie behind all of the internal gateway’s interfaces.

You can use security zone objects to create a generic Security Policy thus reducing the amount of rules necessary in the Rule Base. This Security Policy can be applied to numerous Check Point 1100 Appliance gateways. Resolution of the security zone is done by the actual association on the Check Point 1100 Appliance gateway object in SmartDashboard.

#### Workflow

1. Associate a security zone object with an interface on the gateway object.
2. Use the security zone object in a rule.
3. Install policy.
To associate a security zone object with an interface on the gateway object:
1. In SmartDashboard, from the Network Objects tree double-click a Check Point 1100 Appliance gateway object.
2. From Topology, select the applicable interface and click Edit.
   The Interface Properties window opens.
3. Select one of the predefined Security Zone options.
4. If you want to create a new zone, click New, fill in the details and click OK.
5. Click OK.
   The Check Point 1100 Appliance Gateway General Properties is shown.
6. Click OK.

To create a rule with a security zone:
After you have associated a security zone object to the applicable interface on the gateway, you can use it in a rule. To create a rule with a security zone just add the security zone object to the Source or Destination cell.

For example, to create a rule that allows internal users access to any external network, create a rule with these fields:

<table>
<thead>
<tr>
<th>Policy Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>InternalZone</td>
</tr>
<tr>
<td>Destination</td>
<td>ExternalZone</td>
</tr>
<tr>
<td>Action</td>
<td>accept</td>
</tr>
<tr>
<td>Install On</td>
<td>gateway object or SmartLSM profile</td>
</tr>
</tbody>
</table>

1. Open the Firewall > Policy page.
2. Use the Add Rule buttons to position the rule in the Rule Base.
3. Enter a Name for the rule.
4. In the Source field, right-click the + icon, click Network Objects, select InternalZone from the list, and click OK.
5. In the Destination field, right-click the + icon, click Network Objects, select ExternalZone from the list, and click OK.
6. In the Action field, select accept.
7. Right-click the Install On field, select Add > Targets, and select the gateway object or SmartLSM profile.

Installing a Security Policy

Use this procedure to prepare the policy for automatic installation when the gateway connects.

Note - If Check Point 1100 Appliance has been physically set up and configured, when you successfully complete this step, the policy will be pushed to the gateway. For a list of possible statuses, see Viewing the Policy Installation Status (on page 23).

At the end of the Install Policy process, the policy status for a Check Point 1100 Appliance that has not yet been set up is "waiting for first connection". This implies that trusted communication has not yet been established between the Security Management Server and the Check Point 1100 Appliance. When the gateway connects it establishes trust and attempts to install the policy automatically.

1. Click Policy > Install from the menu.
   The Install Policy window opens.
2. Choose the installation targets - the Check Point 1100 Appliance Security Gateways on which the policy should be installed and the policy components (such as Network Security or QoS).
   By default, all gateways that are managed by the Security Management Server are available for selection.
3. In the Installation Mode section, select how the Security Policy should be installed:
- On each selected gateway independently
- On all selected gateways, if it fails do not install on gateways of the same version

4. Click OK.

The Installation Process window shows the status of the Network Security Policy for the selected target.

![Installation Process - Standard](image)

**Important** - If the Check Point 1100 Appliance object is defined by the appliance is not set up and it is in the "Waiting for first connection status", you will see a message that says "Installation completed successfully". This means that the policy is successfully prepared for installation.

Continue tracking the status of the Security Policy installation with the Policy Installation and the status bar ("Viewing the Policy Installation Status" on page 23).

**Viewing the Policy Installation Status**

You can see the installation status of managed gateways with the status bar that shows at the bottom of the SmartDashboard window. The status bar shows how many gateways are in Pending or Failed mode.

- **Pending** - gateways that are in the waiting for first connection status or are in the pending status (see below for detailed explanations).
- **Failed** - gateways that have failed to install the policy.

The status bar is updated dynamically each time a gateway tries to install a policy or tries to connect to the Security Management server. The results of these actions are also shown in SmartDashboard popup notification balloons when such events occur. You can configure these notifications.

To monitor the status of the last policy installed on each gateway, you can use the Policy Installation Status window.

The window has two sections. The top section shows a list of gateways and status details regarding the installed policy. You can use the filter fields to see only policies of interest and hide other details by defining the applicable criteria for each field. After you apply the filtering criteria, only entries that match the selected criteria are shown. If the system logs trusted communication (SIC) attempts from unknown gateways, a yellow status bar opens below the filter fields.
The bottom section shows details of a row you select in the gateway list (errors that occurred, the date the policy was prepared, verification warnings). If there is a yellow status bar, clicking **Show details** shows the details of unknown gateways trying to connect to the Security Management Server.

These are the different statuses in this window:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Policy status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️</td>
<td>Succeeded</td>
<td>Policy installation succeeded.</td>
</tr>
<tr>
<td>✔️</td>
<td>Succeeded</td>
<td>Policy installation succeeded but there are verification warnings.</td>
</tr>
</tbody>
</table>
| 🔄   | Waiting for first connection | When a Check Point 1100 Appliance object has been configured, but initial trust has not been established (the gateway has not yet connected to the Security Management Server).  
  - If a policy has been prepared, upon successful connection, the policy will be pulled.  
  - If a policy was not prepared, the Policy Type column shows "No Policy Prepared" and upon first connection only trust is established. |
| 🔄   | Waiting for first connection | Same as above but there are warnings that show attempts to establish trust that failed or there are verification warnings. |
### Icon | Policy status | Description
--- | --- | ---
[ ] | Pending | The policy remains in the pending status until the Gateway successfully connects to the Security Management server and retrieves the policy. This status is shown only if there was at least one successful policy installation. For example, when the Security Management server has problems connecting to the Gateway (the Gateway is unavailable for receiving communication, as in behind NAT).
[ ] | Pending | Same as above but there are verification warnings.
[ ] | Warning | Warning.
[ ] | Information | Information.
[ ] | Failed | Policy not installed due to a verification error.
[ ] | Failed | Policy installation failed.

You can access the Policy Installation Status window in these ways:

- From the menu bar - click Policy > Policy Installation Status.
- From the toolbar - click the Policy Installation Status icon.
- From the status bar - click on the Failed or Pending link. The contents of the Policy Installation Status window are shown filtered according to the link clicked.
- From notification balloons - click the See Details link in the balloon.

### Setting Server IP Behind a 3rd Party NAT Device

When using the Management First deployment scenario, the policy is prepared to be fetched by appliances once configured.

During each appliance's first time configuration, the routeable IP address of the Security Management Server is manually configured to create a first connection.

Once SIC is established between the appliance and Security Management Server, the policy will be fetched for the first time. Then, an automatic mechanism calculates the routeable IP address of the Security Management Server for the periodic policy fetch attempts. However, if the Security Management Server is located behind a 3rd party NAT device, the automatic mechanism will fail.

In such cases, it is possible to manually determine the routeable IP address of the Security Management Server, not only for the first connection. It is possible to request that the appliance will always attempt a connection with a manually configured IP address. You can configure this from the First Time Configuration Wizard - Security Management Server Connection page (select Always use this IP address and enter the IP address) or from the WebUI Home > Security Management page.
Chapter 3

Large-scale Deployment Installation

In This Section:

- Large-scale Deployment Workflow ................................................................. 26
- Defining a SmartLSM Gateway Profile for a Large-scale Deployment .......... 26
- Defining a SmartLSM Appliance Cluster Profile ............................................. 27
- Deploying with SmartProvisioning ................................................................. 29
- Creating the Security Policy ............................................................................. 29

Large-scale Deployment Workflow

You can use SmartProvisioning to provision multiple gateways, once you have defined a SmartLSM profile for a gateway or cluster in SmartDashboard.

This is the suggested workflow for large-scale deployments:

1. Create the necessary profiles for your deployment groups (gateways or clusters of gateways) in SmartDashboard.
2. Install the Security Policy in SmartDashboard.
3. Create the actual cluster or gateway objects in SmartProvisioning based on the SmartLSM profiles defined in SmartDashboard. For more details, see SmartProvisioning (on page 33).
4. Configure the corresponding appliances using the First Time Wizard. Alternatively, you can use a USB drive to quickly configure many appliances without using the First Time Wizard. For more details, see Deploying from a USB Drive (on page 44).
5. Manage the appliance settings in SmartProvisioning.

Defining a SmartLSM Gateway Profile for a Large-scale Deployment

SmartLSM lets you manage a large number of Check Point 1100 Appliance gateways from one Security Management Server. When you use a SmartLSM profile, you reduce the administrative overhead per gateway by defining most of the gateway properties, as well as the policy, per profile. The SmartLSM profile is a logical object that contains the firewall and policy components.

Use SmartDashboard to define a single SmartLSM profile for Check Point 1100 Appliance.

To define a single SmartLSM profile Check Point 1100 Appliance:

1. Log in to SmartDashboard using your Security Management credentials.
2. Open the Security Policy that you want to be enforced on the Check Point 1100 Appliance SmartLSM Security Gateways.
3. From the Network Objects tree, right-click Check Point and select SmartLSM Profile > Small Office Appliance Gateway.
   The SmartLSM Security Profile window opens.
4. Define the SmartLSM security profile using the navigation tree in this window.
   To open the online help for each window, click Help.
5. Click OK and then install the policy.

Note - To activate SmartProvisioning functionality, a security policy must be installed on the LSM profile.
Defining a SmartLSM Appliance Cluster Profile

The SmartLSM Appliance Cluster Profile is a logical object like the SmartLSM Appliance Gateway profile. It contains the firewall and policy components but also requires logical topology configuration.

The topology table in the SmartLSM Cluster Profile is a template for all SmartLSM clusters that will be created with this profile. The SmartLSM Cluster Profile is designed to automatically assign the configuration settings and security policies to the SmartLSM cluster.

The SmartLSM Cluster Profile and its topology are configured in SmartDashboard. Then the SmartProvisioning SmartConsole GUI is used to connect and manage the appliances by the Security Management Server.

Before doing the procedure:

- Prepare two Check Point 1100 Appliances
- Configure matching internal interfaces with IP addresses in the same subnet. For example, if you use LAN1 on one of the appliances, make sure to use LAN1 on the second appliance.
- Prepare the WAN interfaces to be on the same subnet
- Choose a random IP address from the WAN and the Internal networks addresses' pool to use as the Cluster Virtual IP.

To create a SmartLSM Cluster profile:

1. In SmartDashboard, from Network Objects, right-click Check Point > SmartLSM profile > Small Office Appliance Cluster.
2. In General Properties, enter a Name for the profile (for example, ClusterProfile1).
3. Select the Cluster Members tab and click Add to add the two cluster members to the profile.

4. Select the Topology tab and click Edit to insert a template topology. This is an example of a SmartLSM cluster profile topology table.

For each SmartLSM cluster, you must define at least 3 networks:
- External (one interface for each Cluster Member and shared virtual IP address)
- Internal (one interface for each Cluster Member and shared virtual IP address)
- Internal - Sync (one interface for each Cluster Member)
The network addresses (for example, 1.1.1.194) for each interface are not the actual addresses for your SmartLSM Cluster environment. Those are used for the template. The actual network addresses are modified in the next configuration step in the SmartProvisioning application.

**Important**

The 'host' octet for each member's interface address such as "59" for Member1 - WAN (for example, 1.1.1.59) must be its real host address and cannot be modified. Make sure to configure it correctly.

However, the 'host' octet for the Virtual IP addresses can be modified later.

5. For each of the Virtual IP interfaces, double-click their text field to enter the interface name, security zone, network type, IP address, and Net Mask. For the Internal and Sync interfaces, make sure to select **Network defined by the interface IP and Net Mask**. Also set Anti-Spoofing for each interface in the **Anti-Spoofing** tab. Keep the default settings in the Member Network tab.

![Interface Properties](image-url)

**Anti-Spoofing** tab

![Anti-Spoofing tab](image-url)
For each cluster member, double-click the Topology text field to enter the interface name, IP address, and Net Mask. For VLANs, make sure the member names use the actual physical interface names on the machines. Note that these are the same names that are shown in the appliance’s WebUI, but replace the colon character ":" with a period character "." For example, if the WebUI shows LAN1:10, enter here LAN1.10.

After saving, install policy on the Cluster Profile and close SmartDashboard.

Continue in SmartProvisioning ("Creating a SmartLSM Appliance Cluster" on page 35).

Deploying with SmartProvisioning

You can use SmartProvisioning to manage Check Point 1100 Appliance gateways with the SmartLSM profiles defined in SmartDashboard. Configure these appliances using the First Time Wizard or a USB drive configuration file before you manage them with SmartProvisioning.

For more information about large-scale deployment using SmartProvisioning, see the R76 SmartProvisioning Administration Guide (http://supportcontent.checkpoint.com/solutions?id=sk64361).

Creating the Security Policy

Installing a Security Policy

Use this procedure to prepare the policy for automatic installation when the gateway connects.

Note - If Check Point 1100 Appliance has been physically set up and configured, when you successfully complete this step, the policy will be pushed to the gateway. For a list of possible statuses, see Viewing the Policy Installation Status (on page 23).

At the end of the Install Policy process, the policy status for a Check Point 1100 Appliance that has not yet been set up is "waiting for first connection". This implies that trusted communication has not yet been established between the Security Management Server and the Check Point 1100 Appliance. When the gateway connects it establishes trust and attempts to install the policy automatically.

1. Click Policy > Install from the menu.
   The Install Policy window opens.
2. Choose the installation targets - the Check Point 1100 Appliance Security Gateways on which the policy should be installed and the policy components (such as Network Security or QoS).
   By default, all gateways that are managed by the Security Management Server are available for selection.
3. In the Installation Mode section, select how the Security Policy should be installed:
   • On each selected gateway independently.
• On all selected gateways, if it fails do not install on gateways of the same version

4. Click OK.

The Installation Process window shows the status of the Network Security Policy for the selected target.

![Installation Process Window]

**Important** - If the Check Point 1100 Appliance object is defined by the appliance is not set up and it is in the "Waiting for first connection status", you will see a message that says "Installation completed successfully". This means that the policy is successfully prepared for installation.

Continue tracking the status of the Security Policy installation with the Policy Installation and the status bar ("Viewing the Policy Installation Status" on page 23).

**Viewing the Policy Installation Status**

You can see the installation status of managed gateways with the status bar that shows at the bottom of the SmartDashboard window. The status bar shows how many gateways are in Pending or Failed mode.

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The status bar is updated dynamically each time a gateway tries to install a policy or tries to connect to the Security Management server. The results of these actions are also shown in SmartDashboard popup notification balloons when such events occur. You can configure these notifications.

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<tr>
<td>✓</td>
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<td>Policy installation succeeded.</td>
</tr>
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<td>✓</td>
<td>Succeeded</td>
<td>Policy installation succeeded but there are verification warnings.</td>
</tr>
</tbody>
</table>
| ❌   | Waiting for first connection | When a Check Point 1100 Appliance object has been configured, but initial trust has not been established (the gateway has not yet connected to the Security Management Server).
- If a policy has been prepared, upon successful connection, the policy will be pulled.
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<p>| ❌   | Waiting for first connection | Same as above but there are warnings that show attempts to establish trust that failed or there are verification warnings. |</p>
<table>
<thead>
<tr>
<th>Icon</th>
<th>Policy status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="pending.png" alt="Icon" /></td>
<td>Pending</td>
<td>The policy remains in the pending status until the Gateway successfully connects to the Security Management server and retrieves the policy. This status is shown only if there was at least one successful policy installation. For example, when the Security Management server has problems connecting to the Gateway (the Gateway is unavailable for receiving communication, as in behind NAT).</td>
</tr>
<tr>
<td><img src="pending.png" alt="Icon" /></td>
<td>Pending</td>
<td>Same as above but there are verification warnings.</td>
</tr>
<tr>
<td><img src="warning.png" alt="Icon" /></td>
<td>Warning</td>
<td>Warning.</td>
</tr>
<tr>
<td><img src="info.png" alt="Icon" /></td>
<td>Information</td>
<td>Information.</td>
</tr>
<tr>
<td><img src="fail.png" alt="Icon" /></td>
<td>Failed</td>
<td>Policy not installed due to a verification error.</td>
</tr>
<tr>
<td><img src="fail.png" alt="Icon" /></td>
<td>Failed</td>
<td>Policy installation failed.</td>
</tr>
</tbody>
</table>

You can access the Policy Installation Status window in these ways:

- From the menu bar - click **Policy > Policy Installation Status**.
- From the toolbar - click the Policy Installation Status icon.
- From the status bar - click on the **Failed** or **Pending** link. The contents of the Policy Installation Status window are shown filtered according to the link clicked.
- From notification balloons - click the **See Details** link in the balloon.
Chapter 4

SmartProvisioning

In This Section:
- Creating a Gateway .......................................................... 33
- Creating a SmartLSM Appliance Cluster ................................ 35
- Defining SmartLSM Gateways Using LSM CLI .......................... 39
- Managing Device Settings .................................................... 39

You can create a Security Gateway or cluster object out of SmartLSM profiles in SmartProvisioning.
You can also manage device settings such as Hotspot, RADIUS, and Internet options.

Creating a Gateway

Make sure you have a SmartLSM gateway profile defined in SmartDashboard before you create a gateway in SmartProvisioning.

To create a new gateway:
1. Open SmartProvisioning.
2. In the Devices page, right-click an empty row in the table, select New SmartLSM > Small Office Appliance Gateway.
   The SmartLSM Security Gateway General Properties page opens.

General Properties
1. Enter a Name for the SmartLSM Security Gateway. It cannot contain spaces or non-alphanumeric characters.
2. Enter an optional Comment that identifies the SmartLSM Security Gateway.
3. Click Next.

More Information
1. In SmartLSM gateway, select the firmware version of the installed Check Point 1100 Appliance.
2. In Security Profile, select the relevant SmartLSM gateway profile that the SmartLSM Security Gateway is mapped to.
3. In OS, select the operating system of the gateway. Make sure the selection fits the hardware type.
4. In Enable Provisioning, select this checkbox to enable this gateway to be managed with provisioning configurations. For more information, see Managing Device Settings (on page 39).
5. In No Provisioning Profile, select this option if you want to enable provisioning but are not yet ready to assign a specific profile.
6. In Provisioning Profile, select the provisioning profile to assign to this gateway, from the list of profiles created in SmartProvisioning.
7. Click Next.

Communication Properties

In the Communication Properties page, you define an Activation Key that is used to set up Secure Internal Communication (SIC) Trust between the SmartLSM Security Gateway and the Security Management Server. This is the same key that you should enter in the one-time password field of the Security
Management Server Authentication page of the Check Point 1100 Appliance First Time Configuration Wizard.

**To generate a key automatically:**
1. Select **Generate Activation Key automatically**.
2. Click **Generate**.
   The Generated Activation Key window opens.
3. Click **Accept**.
   The two Activation Key fields show the new key in hidden text. You cannot view it in clear text again. If you click **Cancel**, the generated key is discarded.

**To manually define an activation key:**
1. Select **Activation Key**.
2. Enter your own key, a string of any length.
3. In **Confirm Activation Key**, enter the key again. You cannot copy the text from the first field.
   To clear the key, click **Clear**.

**To initialize certification:**
The SIC certificate must be shared between the Security Management Server and the SmartLSM Security Gateway. With this SmartLSM wizard, you create the key on the Security Management server (the SIC certificate and the IKE certificate for the selected gateway are created when you finish this wizard). The certificate will be pulled by the gateway when it first connects to the Security Management Server after it is configured with the Check Point 1100 Appliance First Time Configuration Wizard.
1. If you know the IP address of the SmartLSM Security Gateway, select **This machine currently uses this IP address**, and enter the IP address.
2. If you do not know the IP address of the SmartLSM Security Gateway, select **I do not know the current IP address**.
3. Click **Next**.

**VPN Properties**
1. Select how to create a VPN certificate:
   - For a CA certificate from the Internal Check Point CA, select **I wish to create a VPN Certificate from the Internal CA**.
   - For a CA certificate from a third party (for example, if your organization already has certificates from an external CA for other devices), clear this checkbox and request the certificate from the appropriate CA server.
2. Click **Next**.

**Finish**
1. Select **Edit SmartLSM gateway properties after creation** to start working with the newly created object.
2. Click **Finish** to complete the SmartLSM Security Gateway creation.

After the SmartLSM Security Gateway object has been created:
- Update the Corporate Office Gateway.
- If the VPN option was selected in the VPN Properties page, the Certificate Authority issues a certificate to the appliance. This certificate is installed on the appliance the first time that the SmartLSM Security Gateway connects to the Security Management Server.

**To update the Corporate Office Gateway:**
1. Select **Update Corporate Office Gateway** from the toolbar.
2. Select the **Corporate Office Gateway** from the list.
   It is important that the Corporate Office Gateway be updated whenever SmartLSM Security Gateways are added, deleted, or modified (such as the generation of a new IKE key, a Push Policy action, or a Push Dynamic Objects action).
Creating a SmartLSM Appliance Cluster

Make sure you have a SmartLSM cluster profile defined in SmartDashboard before you create a Small Office Appliance cluster in SmartProvisioning.

To create a new SmartLSM Security Cluster:
1. Open SmartProvisioning.
2. In the Devices page, right-click an empty row in the table, select New SmartLSM > Small Office Appliance Cluster.
   The SmartLSM Security Gateway General Properties page opens.

**General Properties**

1. Enter a unique Cluster Name Prefix (Suffix is optional).
   The SmartLSM Security Cluster name will be: <prefix>cluster<suffix>.
2. In Cluster Main IP Address, enter the real external virtual IP address for your actual gateway cluster.

![SmartLSM Security Cluster General Properties](image)

3. Click Next.

**Cluster Properties**

1. In Version, select the firmware version of the Check Point 1100 Appliance appliances.
2. In Security Profile, select the SmartLSM Cluster Profile that was created in SmartDashboard (in the example ClusterProfile1).
3. In Enable Provisioning, select this checkbox to enable this gateway to be managed with provisioning configurations. For more information, see Managing Device Settings (on page 39).
4. In No Provisioning Profile, select this option if you want to enable provisioning but are not yet ready to assign a specific profile.
5. In **Provisioning Profile**, select the provisioning profile to assign to this gateway, from the list of profiles created in Smart Provisioning.

6. Click **Next**.

**Cluster Names**

The cluster members' names are shown with the configured prefix.

Click **Next**.
More Information

1. Click **Edit** to override the settings of the template topology on each of the interfaces. For example, select WAN and click Edit.

   ![Interface configuration table]

   The interface's window opens.

   ![Interface configuration window]

   **Interface Member Network IP Address and Netmask**
   - **Member Network Override:** 1.1.1.0
   - **Member Network in Profile:** 1.1.1.0
   - **Netmask:** 255.255.255.0

   **Cluster IP Address and Netmask**
   - **IP Address Override:**
   - **Netmask Override:**
   - **IP Address in Profile:** 1.1.1.134
   - **Netmask in Profile:** 255.255.255.0

   ![Cluster configuration options]
2. In **IP Address Override**, enter the actual network IP address to override the template Network address.

![Network settings screenshot]

3. Click **OK** and do the above steps again for all the interfaces.

4. Click **Next**.

**Communication Properties**

1. Select a member and click **Initialize**. Enter the trusted communication (SIC) details and click **OK**.

![Communication properties screenshot]

2. Do this step again for the second member.

3. Click **Next**.

**VPN Properties**

1. Select how to create a VPN certificate:
   - For a CA certificate from the Internal Check Point CA, select **I wish to create a VPN Certificate from the Internal CA**.
For a CA certificate from a third party (for example, if your organization already has certificates from an external CA for other devices), clear this checkbox and request the certificate from the appropriate CA server.

2. Click **Next**.

### Finish

1. Click **Finish**. After the wizard finishes, wait until the SIC initialization completes. It can take a few minutes. When it completes, you see the cluster object and its two members. When you double-click the cluster object you can see that the topology is configured with the actual addresses.

2. On each Check Point 1100 Appliance, open the WebUI **Home > Security Management** page and click **Fetch Policy** to manually pull the policy immediately. Alternatively, the appliance connects to the Security Management Server at predefined periodic intervals to pull the policy.

### Defining SmartLSM Gateways Using LSM CLI

This is a sample SmartLSM CLI script that you can use to create a new gateway object and associate it with a SmartLSM profile. Optionally, you can also set a SIC password and initiate a SIC connection.

```
LSMcli <server> <user> <password> AddROBO CPSG80 <RoboName> <Profile> [-O=<ActivationKey> [-I=<IP>]]
```

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;server&gt;</td>
<td>The Security Management Server on which to create the gateway object</td>
</tr>
<tr>
<td>&lt;user&gt;</td>
<td>The username of the Security Management Server administrator</td>
</tr>
<tr>
<td>&lt;password&gt;</td>
<td>The password of the Security Management Server administrator</td>
</tr>
<tr>
<td>&lt;RoboName&gt;</td>
<td>The name for the new gateway object</td>
</tr>
<tr>
<td>&lt;Profile&gt;</td>
<td>Then name of the SmartLSM profile to associate with the gateway</td>
</tr>
<tr>
<td>&lt;ActivationKey&gt;</td>
<td>The SIC password</td>
</tr>
<tr>
<td>&lt;IP&gt;</td>
<td>The IP to use to initiate a SIC connection</td>
</tr>
</tbody>
</table>

### Managing Device Settings

You can manage device settings directly on individual gateways or you can use a SmartProvisioning Profile to manage multiple gateways. For more information about provisioning profiles and creating them, see the *SmartProvisioning Administration Guide*.

The below device settings are unique to Check Point 1100 Appliance. They can be defined directly on the device or through the profile. Their tabs are:
Configuring Firmware

This section explains how to configure firmware installation settings for the provisioning profile for Check Point 1100 Appliance. When you configure firmware settings on a Provisioning Profile, you give the configuration for all Check Point 1100 Appliance appliances that reference this profile.

Firmware configuration lets you replace the firmware on the Security Gateway. The Security Gateway version must match its SmartLSM profile’s version as defined in SmartDashboard for correct policy behavior. As a result, after firmware upgrade, the SmartLSM profile is replaced with the default SmartLSM security profile.

In some instances, it may be necessary to define exceptions for the default SmartLSM security profile. For example, if you do not want all gateways to use the specified default SmartLSM profile after installation, you can customize different security profiles to replace known security profiles.

Let's say you have a scenario with these details:

- The default SmartLSM profile after installation is configured to use a SmartLSM profile called "NewLSM".
- After firmware installation, you want the "NewLSM" profile to be installed on all Security Gateways except for gateways that currently use the "GroupA_LSM" profile.
- You want to replace the "GroupA_LSM" profile with a profile called "GroupA_NewLSM".

In such a scenario, you add an exception that replaces the "GroupA_LSM" profile with the "GroupA_NewLSM" profile.

You can install the firmware with one of these options:

- **Immediately** - Installs the firmware in two steps:
  - Downloads the firmware immediately during the next synchronization with a Security Gateway that references this profile
  - Installs the firmware when the download completes

- **According to time ranges** - You can define download and installation time ranges for the firmware image. The download and installation time can be limited to a specified list of time ranges in the week. They will start at the nearest time range after firmware settings were applied. You can also define that the download will take place immediately as above and only installation will be according to specified time ranges. For example, if the firmware installation settings were applied on Sunday and there are two time ranges:
  - One range is set to Friday 00:00 to Saturday 00:00
  - One range is set to Wednesday 23:00 to Thursday 06:00

  The firmware will be installed between Wednesday 23:00 and Thursday 06:00.

  In the event that the Security Gateway did not succeed to download and/or install the firmware during the nearest time range, it will try again in the next time range.

**To configure firmware installation settings on a Provisioning Profile:**

1. Open the Security Gateway Profile window, and select the Firmware tab.
2. Select Manage firmware centrally from this application.
3. Click Advanced. The Profile Settings window is displayed.
4. Select one of these override profile settings:
   - **Allowed**
   - **Denied**
   - **Mandatory**

   For more information about override profile settings, see Configuring Profile Settings (on page 42).
5. In **Firmware image**, click **Select** to select a firmware image that has been uploaded through SmartUpdate.

6. In **Default SmartLSM Profile after installation**, select the new SmartLSM profile of the Security Gateway (the Security Gateway version must match its SmartLSM profile's version as defined in SmartDashboard for correct policy behavior). The Security Gateway will replace its SmartLSM profile after successful firmware installation and only if the new firmware version is different from the version you have now.

7. If necessary, click **Exceptions** to choose a new SmartLSM profile for Security Gateways with a specified SmartLSM profile.
   - **Add/Edit** - Click **Add** or **Edit** to open the **Exceptions** window to define/change an exception for a SmartLSM profile replacement. SmartLSM profiles will not be shown unless they are from a version higher than R71.
     - **Current SmartLSM Profile** - Select a SmartLSM profile from the list. A SmartLSM profile is shown only if the version is not R71 and not the selected firmware version. Make sure you have installed policy for the SmartLSM profile in SmartDashboard.
     - **SmartLSM Profile after installation** - Select a SmartLSM profile that will replace the SmartLSM profile after the firmware image installation. A SmartLSM profile is shown only if the version is the same as the selected firmware version. Make sure you have installed policy for the SmartLSM profile in SmartDashboard.
   - **Remove** - Click to remove a SmartLSM profile exception setting.

8. Select one of the options to install the firmware:
   a) **Immediately** - Downloads the firmware immediately but installs it in the next synchronization with a Security Gateway that references this profile.
   b) **According to these time ranges** - Select to use the Security Gateway time or local time.
      - **Add/Edit** - Click Add or Edit to open the Time Range window to define/change the weekdays and times for downloading and installing the firmware image. Select the days and times and click **OK**.
      - **Remove** - Select a range from the list and click **Remove** to delete a time range.
      - **Download image immediately** - Click this option to download the firmware image immediately but install the image during one of the set time ranges.

9. Click **Show profile settings** - to see the settings of the Provisioning Profile that this gateway references.

10. Click **OK**.

**Configuring RADIUS**

You can configure the RADIUS server (Remote Authentication Dial In User Service) that provides authentication, authorization, and accounting for Check Point 1100 Appliance gateways. By configuring RADIUS in the Provisioning Profile, you can configure it once for all gateways that reference this profile. The RADIUS server must be already defined as a SmartDashboard object.

You can configure your appliance to contact more than one RADIUS server. If the first server in the list is unreachable, the next RADIUS server in the list is contacted to authenticate with.

**To configure RADIUS settings on a Provisioning Profile:**
1. Open the **Security Gateway Profile** window, and select the **RADIUS** tab.
2. Select **Manage RADIUS settings centrally from this application**.
3. Click **Advanced**. The Profile Settings window is displayed.
4. Select one of these override profile settings:
   - **Allowed**
   - **Denied**
   - **Mandatory**
   For more information about override profile settings, see Configuring Profile Settings (on page 42).
5. Select **RADIUS is activated on device** to enable RADIUS on the Check Point 1100 Appliance.
6. Click **Add** to add RADIUS servers that have been defined in SmartDashboard, select a RADIUS server from the list and click **OK**.
7. To remove a server, select a server in the list and click **Remove**.
8. Use **Up** and **Down** to set the priority used for contacting RADIUS servers.

9. Click **Allow administrators from specific RADIUS groups only (comma separated)** to allow authentication from specified groups as defined on the RADIUS server. Only administrators belonging to those groups can get access.

10. Click **OK**.

### Configuring Hotspot

**To configure hotspot settings on a Provisioning Profile:**

1. Open the **Security Gateway Profile** window, and select the **Hotspot** tab.
2. Select **Manage Hotspot settings centrally from this application**.
3. Click **Advanced**. The Profile Settings window is displayed.
4. Select one of these override profile settings:
   - **Allowed**
   - **Denied**
   - **Mandatory**
   For more information about override profile settings, see Configuring Profile Settings (on page 42).
5. Select **Hotspot is activated on device** to activate the hotspot.
6. 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, the entered text will be shown.
   - **Require Authentication** - To require user authentication, select the checkbox.
   - **Allow users from specific group** - Select to allow access to a specific user group and not all users. Enter the group's name in the text box.

7. Click **Apply**.

### Configuring a Configuration Script

**To configure a configuration script on a Provisioning Profile:**

1. Open the **Security Gateway Profile** window, and select the **Configuration Script** tab.
2. Select **Manage Configuration Script centrally from this application**.
3. Click **Advanced**.
   The **Profile Settings** window opens.
4. Select one of these override profile settings ("Configuring Profile Settings" on page 42):
   - **Allowed**
   - **Denied**
   - **Mandatory**
5. In **Configuration Script**, enter a script to run on the Check Point 1100 Appliance gateway.
6. Click **Apply**.

### Configuring Profile Settings

For each set of configurations that can be managed with a Provisioning Profile, you can decide which settings will have preference: **local** (not provisioned) or **central** (from SmartProvisioning individual management or from Provisioning Profile).

**To determine profile settings:**

1. In the **Profiles List**, right-click a profile and select **Edit Provisioning Profile**.
2. In the Profile window, click any category tab (other than **General**).
3. Decide whether this Provisioning Profile will provide central management of the setting to gateways that reference the profile:
- **Manage settings locally on the device:** Select this option if each gateway that references this profile should have its own settings, configured locally (not on SmartProvisioning), which cannot be overwritten by changes to the Provisioning Profile or to the SmartProvisioning gateway object. If you choose this option, the Gateway window will show: **settings are defined to be managed locally on the device.**

- **Manage settings centrally from this application:** Select this option if each gateway that references this profile should get its configuration for this setting from the Provisioning Profile or from the SmartProvisioning gateway object.

4. If you select to manage settings centrally, click **Advanced.**
   The **Profile Settings** window opens.

5. Select an option for **Overriding profile settings on device level is:**
   - **Allowed:** You can override the profile settings with device-local settings, or with changes to these settings in the SmartProvisioning device window; or you can leave the profile settings as they are.
   - **Denied:** Each gateway takes the settings from the profile, with no option to override the profile settings.
   - **Mandatory:** Each gateway provides is managed without a Provisioning Profile.

6. Click **OK.**
   The choice you make here determines the functionality of the Gateway window, for the type of device configuration for which you made this profile setting.
   For example, if you set Hosts configuration to **Central** and **Allowed:** the Hosts tab on the gateway will enable you to manage the Host List of a gateway by:
   - Provisioning gateways with the Host List of the Provisioning Profile
   - Defining a new Host List (in the Gateway window) that overrides the Provisioning Profile on this gateway
   - Defining the Host List locally on the device (even if it has an assigned Provisioning Profile)

The table below maps the selections in the **Profile Settings** to the displayed options in the Gateway windows.

### Local or Central Management of Provisioned Gateways

<table>
<thead>
<tr>
<th>Profile managed</th>
<th>Profile Override</th>
<th>Gateway Window Display and options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locally</td>
<td>Not relevant</td>
<td>Settings are defined to be managed locally on the device. To change this, refer to Provisioning Profile <em>profile_name</em>. (controls are unavailable)</td>
</tr>
<tr>
<td>Centrally</td>
<td>Override denied</td>
<td>Data must be taken from profile (controls are Read-Only, configured by profile)</td>
</tr>
<tr>
<td>Centrally</td>
<td>Override allowed</td>
<td>Select override method:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- <strong>Manage settings locally on the device:</strong> Local management; override provisioning configurations with local settings.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- <strong>Use profile settings:</strong> Enforce profile settings on this gateway.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- <strong>Use the following settings:</strong> Manage these settings on this gateway individually with the values given here.</td>
</tr>
<tr>
<td>Centrally</td>
<td>Override mandatory</td>
<td><strong>Overriding profile settings is mandatory: configure settings here.</strong> (Each gateway is configured separately)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- <strong>Manage settings locally on the device:</strong> Manage these settings on this gateway locally.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- <strong>Use the following settings:</strong> Manage these settings on this gateway individually with the values given here.</td>
</tr>
</tbody>
</table>

**Warning** - If the **Use the following settings** option is selected and no values are entered for a specific topic, the current settings on the device will be deleted.
Chapter 5

Deploying from a USB Drive

In This Section:

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- Preparing the Configuration Files ....................................................... 45
- Deploying the Configuration File - Initial Configuration ....................... 45
- Deploying the Configuration File - Existing Configuration .................... 46
- Viewing Configuration Logs ................................................................. 46
- Troubleshooting Configuration Files .................................................... 46
- Using the set property Command .......................................................... 48

You can deploy Check Point 1100 Appliance configuration files using a USB drive and quickly configure many appliances without using the First Time Wizard. The configuration file lets you configure more settings and parameters than are available in the First Time Wizard.

You can deploy configuration files in these conditions:

- An appliance with default settings is not configured at all
- An appliance that already has an existing configuration

Check Point 1100 Appliance starts, automatically mounts the USB drive, and checks the root directory for a configuration file.

Sample Configuration File

This is a sample Check Point 1100 Appliance configuration file for USB deployment.
set time-zone GMT+01:00 (Amsterdam/Berlin/Bern/Rome/Stockholm/Vienna)
set ntp server primary 10.1.1.10
set ntp server secondary

set user admin type admin password aaaa
set interface WAN ipv4-address 10.1.1.134 subnet-mask 255.255.255.192 default-gw 10.1.1.129

delete interface LAN1_Switch

set dhcp server interface LAN1 disable
set interface LAN1 ipv4-address 10.4.6.3 subnet-mask 255.255.255.0
add interface LAN1 vlan 2
set dhcp server interface LAN1:2 disable
set interface LAN1:2 ipv4-address 10.4.3.3 subnet-mask 255.255.255.0

set dhcp server interface LAN2 disable
set interface LAN2 ipv4-address 192.168.254.254 subnet-mask 255.255.255.248
set interface LAN2 state on

set admin-access interfaces WAN access allow

set hostname DEMOgw01
set sic_init password aaaa
fetch certificate mgmt-ipv4-address 10.1.1.82 gateway-name DEMOgw01
fetch policy mgmt-ipv4-address 10.1.1.82

Preparing the Configuration Files

The Check Point 1100 Appliance Massive Deployment configuration files are composed of CLish commands. These are the file names that can be used:

- autoconf.clish
- autoconf.XX-XX-XX-XX-XX.clish

You can create multiple configuration files for different Check Point 1100 Appliance gateways. Name each file according to the MAC address of each appliance. Check Point 1100 Appliance first searches for a configuration file with the same MAC address. If there is no file that matches the MAC address of the appliance, the autoconf.clish configuration file is loaded.

Deploying the Configuration File - Initial Configuration

This section describes how to deploy a configuration file on a USB drive to Check Point 1100 Appliance. The file must be correctly configured and formatted before being deployed. The USB drive can be inserted in the front or the rear USB port.

You can deploy the configuration file to Check Point 1100 Appliance when the appliance is off or when it is powered on.

⚠️ Important - Do not remove the USB drive or insert a second USB drive while the Check Point 1100 Appliance configuration script is running. Otherwise, it is possible that Check Point 1100 Appliance does not configure and run correctly.

To deploy the configuration file from a USB drive for the initial configuration:

1. Insert the USB drive into Check Point 1100 Appliance.
   - Check Point 1100 Appliance is OFF - Turn on the appliance. The Power LED comes on and is green.
   - Check Point 1100 Appliance is ON - The appliance automatically detects the USB drive. The USB LED comes on and is solid orange.
2. Check Point 1100 Appliance locates the USB configuration file and begins running the script. The USB LED blinks green while the script is running.

3. The configuration script finishes and the Check Point 1100 Appliance USB LED is solid green.

4. Remove the USB drive from Check Point 1100 Appliance.

   **Note** - The USB LED is red when there is a problem running the configuration script. Turn off Check Point 1100 Appliance and confirm that the configuration files are formatted correctly ("Preparing the Configuration Files" on page 45).

   For more information about errors with configuration files, see Troubleshooting Configuration Files (on page 46).

### Deploying the Configuration File - Existing Configuration

This section describes how to deploy a configuration file on a USB drive to Check Point 1100 Appliance to edit or update the existing configuration. Use the `set property` command to set the appliance to use a configuration file on a USB drive. The USB drive can be inserted in the front or the rear USB port.

You can deploy the configuration file to Check Point 1100 Appliance either when the appliance is off or when it is powered on.

**Important** - Do not remove the USB drive or insert a second USB drive while the Check Point 1100 Appliance configuration script is running. Otherwise, it is possible that Check Point 1100 Appliance does not configure and run correctly.

To deploy the configuration file from a USB drive to a configured appliance:

1. From the CLI, enter the command: `set property USB_auto_configuration once`.
   The appliance is set to use a configuration script from a USB drive.

2. Insert the USB drive in the appliance, the appliance automatically detects the USB drive.
   The USB LED comes on and is solid orange.

3. The appliance locates the USB configuration file and begins running the script. The USB LED blinks green while the script is running.

4. The configuration script finishes.
   The USB LED is solid green and the screen displays: System Started.

5. Remove the USB drive from the appliance.

   **Note** - The USB LED is red when there is a problem running the configuration script. Turn off the appliance and confirm that the configuration files are formatted correctly ("Preparing the Configuration Files" on page 45).

   For more information about errors with configuration files, see Troubleshooting Configuration Files (on page 46).

### Viewing Configuration Logs

After Check Point 1100 Appliance is successfully configured from a USB drive, a log is created.

- The log file is called `autonconf.<MAC>.<timestamp>.<log>`
- The log file is created in the USB root directory and in `/tmp` on the appliance.

### Troubleshooting Configuration Files

This section discusses the scenario where the configuration file fails and the Check Point 1100 Appliance is not fully configured.
**Configuration File Error**

If there is an error and the configuration file fails, the appliance is not fully configured and is no longer in the initial default condition. The commands in the configuration file that appear before the error are applied to the appliance. You can examine the configuration log to find where the error occurred.

When there is a not fully configured appliance, the First Time Wizard is displayed in the Web UI. However, not all of the settings from the failed configuration file are displayed in the First Time Wizard. Check Point recommends that you should not use the First Time Wizard to configure an appliance when the configuration file fails.

*Note*: You should restore the default settings to a partially configured appliance before using the First Time Wizard to ensure that the appliance is configured correctly.

**Suggested Workflow - Configuration File Error**

This section contains a suggested workflow that explains what to do if there is an error with the configuration file on a USB drive. Use the `set property USB_auto_configuration` command when you are running a configuration file script on a configured appliance.

1. The USB drive with the configuration file is inserted into a USB port on Check Point 1100 Appliance.
2. The USB LED on the front panel blinks red. There is a problem with the configuration file script.
   - Sample console output displaying an error
   ```
   Booting Check Point RD-6281-A User Space...
   INIT: Entering runlevel: 3
   ........sd 2:0:0:0: [sda] Assuming drive cache: write through
   sd 2:0:0:0: [sda] Assuming drive cache: write through
   System Started...
   Start running autocofiguration CLI script from USB2 ... Error.
   autoconf.00-1C-7F-21-07-94.2011-07-21.1248.log was copied to USB2
   ```
3. The log file is created and contains the configuration details.
   - The log file is called `autonconf.<MAC>.<timestamp>.<log>`
   - The log file is created in the USB root directory and in `/tmp` on the appliance.
4. Analyze the log file to find the problem.
5. If you cannot repair the configuration file:
   a) Remove the USB drive.
   b) Run the CLI command: `restore default-settings`.
   c) Connect to the Web UI and use the First Time Wizard to configure the appliance.
6. If you understand the error and know how to repair the configuration file:
   a) Remove the USB drive.
   b) Run the CLI command: `restore default-settings`.
   c) Insert the USB drive and run the repaired configuration script again.

**Sample Configuration Log with Error**

This is a sample configuration log file for a configuration script that fails.

```
set hostname Demo1
set hostname: Setting hostname to 'Demo1'
OK

set interface WAN internet primary ipv4-address 66.66.66.11
Error: missing argument 'subnet-mask' for a new connection
Autoconfiguration CLI script failed, clish return code = 1
```
Using the set property Command

The `set property` CLI command controls how Check Point 1100 Appliance runs configuration scripts from a USB drive. These commands do not change how the First Time Wizard in the Web UI configures the appliance.

- `set property USB_auto_configuration off` - The appliance does not run configuration scripts from a USB drive.
- `set property USB_auto_configuration once` - The appliance only runs the next configuration script from a USB drive.
- `set property USB_auto_configuration any` - The appliance always runs configuration scripts from a USB drive.
Chapter 6

Appliance Configuration

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- The Home Tab ............................................................................................................ 51
- Managing the Device ............................................................................................... 58
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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. You can also configure the appliance through the command line.

After your appliance was configured with the First Time Configuration Wizard (see the Check Point 1100 Appliance Getting Started Guide (http://supportcontent.checkpoint.com/documentation_download?ID=22711)), 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. These are the available tabs:

- Home
- Device
- Users & Objects
- Logs & Monitoring

Use the left pane in each tab to navigate between the different pages of the tab.
The Home Tab

**Viewing System Information**
The Home > System page shows an overview of the Check Point 1100 Appliance system.

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

Tell me about the fields...
- **System Information** - Shows the appliance model, installed software version, name, MAC address, system time, and system uptime.
- **Network** - Shows Internet information and network status. You can click the links to configure Internet and Wireless options (if applicable).
- **Statistics** - Shows packet rate and throughput graphs.

**Viewing Blade Status and Statistics**
The Home > Security Dashboard page shows you the active blades.

To view blade and license information:
Click the information (i) icon.

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 or has no license:
   a) Click View demo to see an example of the statistics shown.
   b) Click the close button.

**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.

To set the management type:
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.

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 routeable 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.
Appliance Configuration

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 locally managed, see the *Check Point 1100 Appliance Locally Managed Administration Guide* ([http://supportcontent.checkpoint.com/documentation_download?ID=25040](http://supportcontent.checkpoint.com/documentation_download?ID=25040)).

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.

**If you have Internet connectivity configured:**
- Click **Activate License**.
  
  You will be notified that you successfully activated the appliance and you will be shown the status of your license for each blade.

**If you are working offline while configuring the appliance:**

1. From a computer with authorized access to the Check Point User Center ([http://usercenter.checkpoint.com](http://usercenter.checkpoint.com)) do one of these procedures:
   a) Use your User Center account:
      - Log into your User Center account.
      - Select the specified container of your Check Point 1100 Appliance.
      - From the **Product Information** tab, click **License > Activate**.
        This message is shown: "Licenses were generated successfully."
      - Click **Get Activation File** and save the file locally.
   b) Register your appliance:
      - Go to [http://register.checkpoint.com](http://register.checkpoint.com)
      - Enter the MAC address for the appliance.
      - From **Hardware Platform**, select **2012 Models**.
• From Hardware Model, select 1100 Appliance.
• Fill in your appliance details and click **Activate**.
  This message is shown: "Licenses were generated successfully."
• Click **Get Activation File** and save the file locally.

2. In the Device > License page, click **Offline**.
  The Import from File window opens.

3. **Browse** to the activation file you downloaded and click **Import**. The activation process starts.
  You will be notified that you successfully activated the appliance and you will be shown the status of your license for each blade.

**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**.
  You will be notified that you successfully activated the appliance and you will be shown the status of your license for each blade.

**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.

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

Tell me about the fields...

- **Save as** - Lets you save a selected device as a network object. When you select this option, the New Network Object window 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.
- **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 10:15 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. Configure the fields in the tabs:

### Configuration

- **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.
  - **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

- **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 > 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.

**Advanced > 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.

**Advanced > 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.

**Advanced > Port Settings**
1. 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.
2. **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.
3. If necessary, select **Disable auto negotiation**. This lets you manually define the link speed of the Internet connection.
   a) Select the **DMZ Link Speed**.

**Advanced > QoS Settings**
QoS (bandwidth control) can be activated on Internet connections and can 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.

Select **Enable QoS (download)** and/or **Enable QoS (upload)** and enter the download/upload bandwidth speeds.

**Advanced > 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 are 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.

### ISP Redundancy

- **Route traffic through this connection by default**
  
  In order to route traffic through this connection you need to add specific routes through it.

- **High Availability**
  
  Upon failure of the Primary Internet Connection, traffic will be routed according to the selected priority.
  
  Priority: [1] (The higher the value, the lower its priority)

- **Load Balancing**
  
  Traffic will be distributed automatically according to the configured load balancing weights.
  
  Weight: [10] 100.00% of the total weight

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**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 VAPs by clicking **New**. Editing one of the 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. 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.
Appliance Configuration

- **Radio settings** - Click the button and select the correct *Operation mode*, *Channel*, and *Channel width*. This configuration is global for all wireless networks. Some options may not be 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.
  - **Authentica using** - Select **Password** or **RADIUS servers (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 it. Connecting to the wireless network can be done manually by 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 users 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.
- **Relay** - Enter the IP address for the DHCP server Secondary DHCP server (if necessary).
- **Disabled**

*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.

*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.

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**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 be 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. Choose the IP address and Subnet mask the switch uses.
3. Enable hotspot Captive Portal - Select this checkbox to redirect users to the Hotspot portal before allowing access from this interface. More configuration is necessary in the Device > Hotspot page.
4. In 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

DHCP Server Options tab

See DHCP Server Options tab below

To edit a physical interface:

Configure the fields in the tabs:

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.
Appliance Configuration

Disabled

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

**Advanced tab**

- **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.

**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.

- **Assign to** - Select the physical interface where the new virtual network will be created.

- **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):**

Configure the fields in the tab:

**Configuration tab**

- **VPN Tunnel ID** - A number identifying the VTI.

- **Peer** - The name of the peer gateway network object.

- **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
Appliance Configuration

- Enter a Name for the bridge interface.
- Choose the IP address and Subnet mask the switch uses.
- Enable hotspot Captive Portal - Select this checkbox to redirect users to the Hotspot portal before allowing access from this interface. More configuration is necessary in the Device > Hotspot page.
- 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

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:
Appliance Configuration

- 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 the **Configure in Local Network** link to select the desired interface.
2. Select the **Use Hotspot** checkbox on at least one defined interface.

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

*Note* - Hotspot will only work if you have a Security Policy installed.

**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 browses 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**.

2. Configure the fields:
   - **Portal title** - Keep the default or enter a different title.
   - **Portal message** - Keep the default or enter a different message.
   - **Users must approve 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 Identity 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>
<tr>
<td>Source</td>
<td>The route rule applies only to traffic whose source matches the source IP address/network.</td>
</tr>
<tr>
<td>Service</td>
<td>The route rule applies only to traffic whose service matches the service IP protocol and ports or service group.</td>
</tr>
<tr>
<td>Next Hop</td>
<td>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.</td>
</tr>
<tr>
<td>Metric</td>
<td>Determines the priority of the route. If multiple routes to the same destination exist, the route with the lowest metric is chosen.</td>
</tr>
</tbody>
</table>

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
- Upgrade the appliance software to the latest Check Point version
- 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 upgrade your appliance:

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 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. However, in this case, in addition to re-activating your license, you'll also have to reinitialize trusted communication with the Management Server (in Management Server page), since you need to supply a new security certificate to the new appliance, as two appliances cannot use the same security certificate.
- 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.

3. You do not necessarily need to back up the security policy installed on the appliance, since you can always fetch it from your Management Server. If you wish to backup your security policy, click **Backup security policy**.
   
   By default, system settings are always backed up.

4. Click **Create Backup**.

5. 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`

6. 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. However, in this case, in addition to re-activating your license, you’ll also have to reinitialize trusted communication with the Management Server (in Management Server page), since you need to supply a new security certificate to the new appliance, as two appliances cannot use the same security certificate.

  Make sure:
  
  - To change the IP address of the duplicated appliance (Device > Internet page).
  - You have a new license for that appliance.
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
- **Secured wireless** - Wireless networks with a secure password (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 IPv4 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.
5. Change the **WEB Port (HTTPS)** and/or **SSH port** if necessary.
6. Click **Add**. 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.
3. Click **Add**. The Access Policy IP Address Configuration page appears.
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 IP Address you want to delete from the IP 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 Security Policy in SmartDashboard to allow this access. To override this, go to **SmartDashboard > Firewall Implied Rules** section and clear the option **Accept Web and SSH connections for gateway's administration**.

- For your convenience, when you block the IP address or the interface source 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 Device Details**

In the Device > Device Details page, you can enter a name for the appliance.

- Enter an **Appliance Name** for the appliance that is used 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 standard of each country.

**Important** - If the gateway's Internet connection is assigned an IP address dynamically and the identifier option in SmartDashboard is set to Gateway name, the Appliance Name must be identical to the Check Point 1100 Appliance name defined for the Check Point 1100 Appliance object in SmartDashboard.

**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 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.

Using System Tools
See Using System Tools (on page 56).

Configuring High Availability
The Security Gateway is not part of a Security Cluster. To define it as a cluster member, define a Security Cluster object in your Security Management Server and install a security policy.
Managing Users and Objects

This section describes how to set up and manage local administrators, authentication servers, and network resources.

Configuring Local System Administrators

See Configuring Local System Administrators (on page 72).

Managing Authentication Servers

In the Users & Objects > 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 this type of authentication server:
- 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.

To add a RADIUS server:
1. Click RADIUS servers.
2. In the Primary tab, enter this information:
   - IP address - Where the RADIUS server is deployed.
   - Port - The port number to which the RADIUS server communicates with clients. The default is 1812.
   - Shared secret - The secret between the RADIUS server and the Check Point 1100 Appliance.
     - Show - Displays the shared secret.
   - Timeout (seconds) - A timeout value in seconds.
3. Repeat step 2 for a Secondary RADIUS server if applicable.
4. Click Apply.
   The primary and/or secondary servers are added to the RADIUS section on the page.

RADIUS servers can be used for defining administrators. See the Users & Objects > Administrators page.

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 policy based routing in the Device > Routing page.

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. 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.

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.

There are built in service groups for common services.

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.
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.
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. 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** or the **Add** link.
   The New Network Object window opens.
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**.
   The New Network Object window opens.
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**.
   The New Network Object window opens.
2. In **Type**, select **Network**.
3. Enter an **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 URLs Lists

The Users & Objects > URLs Lists page lets you override central management's URL filtering policy in your local Check Point 1100 Appliance. Use this feature to define URL blacklists and whitelists exceptions to the global policy, whose content can be edited per gateway. Before you can use this feature, the system administrator of the Security Management Server that centrally manages this gateway must complete prerequisite steps.

You can use this page to manage URLs lists:
- Add new URLs/IP addresses or regular expressions to URLs lists.
- Edit existing URLs/IP addresses or regular expressions from URLs lists.
- Delete existing entries in URLs lists.
- Enable and disable this feature.

Prerequisite steps for the system administrator of the Security Management Server:
1. Turn on the Application Control blade for the gateway object that represents this Check Point 1100 Appliance.
2. Configure custom applications in SmartDashboard with these guidelines:
   a) Use the prefix: LOCAL_ (case-sensitive) when naming a custom application. For example, LOCAL_whitelist or LOCAL_blacklist.
   b) Enter at least one URL for this custom application, it can be a dummy URL. The actual list of URLs to allow or block is defined locally in the Check Point 1100 Appliance.
3. Create rules in the Application Control Rule Base using the custom defined applications with the LOCAL_ prefix. Make sure to add the rules in positions that make sense in the Rule Base.
4. Install policy (on the specified gateway).

Steps for the system administrator of this Check Point 1100 Appliance:
1. On this page, set Local URLs Lists Management to ON.
2. Add URLs/IP addresses or regular expressions to the predefined URLs lists (the custom applications defined in Security Management Server).

   Note - The names of the predefined URLs lists will NOT show the LOCAL_ prefix that was used to define the application in Security Management Server. For example, LOCAL_whitelist will be shown as just whitelist.

   Important -
   - If Application Control is turned off or no custom applications have been defined in the Security Management Server, this page is empty and shows a message that informs that local URLs can only be defined after URLs lists are predefined in the appliance's security policy.
   - If a list was removed or renamed in the Security Management Server, a warning is shown above the table and next to the URLs List in the table.

To create a new URLs list entry:
1. Click New.
2. Select URL/IP Address or Regular Expressions.
   The New URL/IP Address or New Regular Expressions window opens.
3. Select the applicable **URLs list** from the list.
4. Enter a **URL/IP Address** or a **regular expression** for the URLs list.
5. Click **Apply**.
   The URL is added to the list of entries for the specified URLs list in the table.

**To edit a URLs list entry:**
1. Select an entry from the list.
2. Click **Edit**.
3. Make the necessary changes.
4. Click **Apply**.

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

**To filter for a specified URLs list:**

Do one of these:

- In the **All Lists** box, select the URLs list.
- In the **Type to filter** field, enter the URLs list name to 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 lets you browse the last 100 log records.

These logs are sent to SmartView tracker, but are also available on this page, for your convenience. Note that the number of logs shown is not configurable, and is not related to the SmartDashboard setting “GW properties> Logs and alert > Max log size…” (this setting only applies to logs that are saved by the gateway when the Security Management Server cannot be reached).

To search for a security log:

Enter your query in the Enter search query box. Use this syntax: '<IP_address>', '<column_name>:<value>', '<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 double arrow refresh icon.

To stop local logging:

When necessary, you can stop local logging to remove the overhead of creating and maintaining logs to improve performance. 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.

Logs can be stored either centrally or locally. For local storage, you can use an SD card. When you insert it, it mounts automatically then saves the logs. Before ejecting an SD card, make sure to unmount it. Select Options > Eject SD card safely.

Logs can be stored either centrally or locally. For local storage, you can use an SD card.
Before ejecting an SD card, make sure to unmount it from the Options menu, select Eject SD card safely.

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 system logs when necessary for additional logging storage.

To configure an external System Log server:
1. Click Configure next to the External System Log Server notification.
   The External System Log Server window opens.
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.

Managing Active Computers in Internal Networks

See Managing Active Computers in Internal Networks (on page 55).

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 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.

**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.

**Using System Tools**
See Using System Tools (on page 56).

**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.

---

**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**.
Security 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.

1. 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.
  - **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**.

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.

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.
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.
Chapter 7

Advanced Configuration

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Dynamic Routing

Dynamic Routing is supported using Gaia networking stacks. RIP, OSPF, BGP, and PIM are supported. Note that configuration is only supported through the CLI.

This is a sample OSPF interface configuration:

```
set ospf
  area <backbone | ospf_area> range ip_prefix <on | off>
  area <backbone | ospf_area> range ip_prefix restrict <on | off>
  stub-network ip_prefix <on | off>
  stub-network ip_prefix stub-network-cost <1-677722>

set ospf interface if_name
  area <backbone | ospf_area> <on | off>
  hello-interval <1-65535>
  hello-interval default
  dead-interval <1-65535>
  dead-interval default
  retransmit-interval <1-65535>
  retransmit-interval default
  cost <1-65535>
  priority <0-255>
  passive <on | off>
  virtual-address <on | off>
  authtype none
  simple password
  md5 key authorization key id secret md5 secret
  md5 key authorization key id
```


Note - The save config and route map commands are not supported.

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 92).
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*.ubt 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. If you need to install a new firmware image, refer to the firmware image installation section before reconnecting the appliance to the power source.

**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*.ubt 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

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 90).

Option 8 restarts the appliance.

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 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 ADSL and Wireless Network + ADSL models) |
| 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 93).</td>
</tr>
<tr>
<td>9</td>
<td>ADSL port</td>
<td>Port for attaching ADSL cable. (Only in ADSL and Wireless Network + ADSL models)</td>
</tr>
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