



## **Migrating Check Point Firewall to Cisco Secure Firewall Threat Defense with the Migration Tool**

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## CHAPTER 1

# Getting Started with the Secure Firewall Migration Tool

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## About the Secure Firewall Migration Tool

This guide contains information on how you can download the Secure Firewall migration tool and complete the migration. In addition, it provides you troubleshooting tips to help you resolve migration issues that you may encounter.

The sample migration procedure ([Sample Migration: Check Point to Threat Defense 2100](#)) included in this book helps to facilitate understanding of the migration process.

The Secure Firewall migration tool converts supported Check Point configurations to a supported Secure Firewall Threat Defense platform. The Secure Firewall migration tool allows you to automatically migrate the supported Check Point features and policies to threat defense. You must manually migrate all unsupported features.

The Secure Firewall migration tool gathers Check Point information, parses it, and finally pushes it to the Secure Firewall Management Center. During the parsing phase, the Secure Firewall migration tool generates a **Pre-Migration Report** that identifies the following:

- Check Point configuration XML or JSON lines with errors
- Check Point lists the Check Point XML or JSON lines that the Secure Firewall migration tool cannot recognize. Report the XML or JSON configuration lines under error section in the **Pre-Migration Report** and the console logs; this blocks migration

If there are parsing errors, you can rectify the issues, reupload a new configuration, connect to the destination device, map the Check Point interfaces to threat defense interfaces, map security zones and interface groups, and proceed to review and validate your configuration. You can then migrate the configuration to the destination device.

### Console

The console opens when you launch the Secure Firewall migration tool. The console provides detailed information about the progress of each step in the Secure Firewall migration tool. The contents of the console are also written to the Secure Firewall migration tool log file.

The console must stay open while the Secure Firewall migration tool is open and running.




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**Important** When you exit the Secure Firewall migration tool by closing the browser on which the web interface is running, the console continues to run in the background. To completely exit the Secure Firewall migration tool, exit the console by pressing the Command key + C on the keyboard.

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### Logs

The Secure Firewall migration tool creates a log of each migration. The logs include details of what occurs at each step of the migration and can help you determine the cause if a migration fails.

You can find the log files for the Secure Firewall migration tool in the following location:

```
<migration_tool_folder>\logs
```

### Resources

The Secure Firewall migration tool saves a copy of the **Pre-Migration Reports**, **Post-Migration Reports**, Check Point configs, and logs in the **Resources** folder.

You can find the **Resources** folder in the following location: `<migration_tool_folder>\resources`

### Unparsed File

You can find the unparsed file in the following location:

```
<migration_tool_folder>\resources
```

### Search in the Secure Firewall Migration Tool

You can search for items in the tables that are displayed in the Secure Firewall migration tool, such as those on the **Optimize, Review and Validate** page.

To search for an item in any column or row of the table, click the **Search** (🔍) above the table and enter the search term in the field. The Secure Firewall migration tool filters the table rows and displays only those that contain the search term.

To search for an item in a single column, enter the search term in the **Search** field that is provided in the column heading. The Secure Firewall migration tool filters the table rows and displays only those that match the search term.

## Ports

The Secure Firewall migration tool supports telemetry when run on one of these 12 ports: ports 8321-8331 and port 8888. By default, Secure Firewall migration tool uses port 8888. To change the port, update port information in the *app\_config* file. After updating, ensure to relaunch the Secure Firewall migration tool for the port change to take effect. You can find the *app\_config* file in the following location:

`<migration_tool_folder>\app_config.txt`.



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**Note** We recommend that you use ports 8321-8331 and port 8888, as telemetry is only supported on these ports. If you enable Cisco Success Network, you cannot use any other port for the Secure Firewall migration tool.

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## Notifications Center

All the notifications, including success messages, error messages, and warnings that pop up during a migration are captured in the notifications center and are categorized as **Successes**, **Warnings**, and **Errors**. You can



click the icon on the top right corner any time during the migration and see the various notifications that popped up, along with the time they popped up in the tool.

## Cisco Success Network

Cisco Success Network is a user-enabled cloud service. When you enable Cisco Success Network, a secure connection is established between the Secure Firewall migration tool and the Cisco cloud to stream usage information and statistics. Streaming telemetry provides a mechanism to select data of interest from the Secure Firewall migration tool and to transmit it in a structured format to remote management stations for the following benefits:

- To inform you of available unused features that can improve the effectiveness of the product in your network.
- To inform you of additional technical support services and monitoring that is available for your product.
- To help Cisco improve our products.

The Secure Firewall migration tool establishes and maintains the secure connection and allows you to enroll in the Cisco Success Network. You can turn off this connection at any time by disabling the Cisco Success Network, which disconnects the device from the Cisco Success Network cloud.

# What's New in the Secure Firewall Migration Tool

Version	Supported Features
6.0.1	<p>This release includes the following new features and enhancements:</p> <p><b>Cisco Secure Firewall ASA to Cisco Secure Firewall Threat Defense Migration</b></p> <ul style="list-style-type: none"> <li>You can now optimize network and port objects when you migrate configurations from Secure Firewall ASA to threat defense. Review these objects in their respective tabs in the <b>Optimize, Review and Validate Configuration</b> page and click <b>Optimize Objects and Groups</b> to optimize your list of objects before migrating them to the target management center. The migration tool identifies objects and groups that have the same value and prompts you to choose which to retain. See <a href="#">Optimize, Review, and Validate the Configuration</a> for more information.</li> </ul> <p><b>FDM-managed Device to Cisco Secure Firewall Threat Defense Migration</b></p> <ul style="list-style-type: none"> <li>You can now migrate DHCP, DDNS, and SNMPv3 configurations from your FDM-managed device to a threat defense device. Ensure you check the <b>DHCP</b> checkbox and <b>Server, Relay,</b> and <b>DDNS</b> checkboxes on the <b>Select Features</b> page. See <a href="#">Optimize, Review, and Validate the Configuration</a> for more information.</li> </ul> <p><b>Fortinet Firewall to Cisco Secure Firewall Threat Defense Migration</b></p> <ul style="list-style-type: none"> <li>You can now migrate URL objects in addition to other object types from a Fortinet firewall to your threat defense device. Review the <b>URL Objects</b> tab in the <b>Objects</b> window in <b>Optimize, Review and Validate Configuration</b> page during migration. See <a href="#">Optimize, Review, and Validate the Configuration</a> for more information.</li> </ul> <p><b>Palo Alto Networks Firewall to Cisco Secure Firewall Threat Defense Migration</b></p> <ul style="list-style-type: none"> <li>You can now migrate URL objects in addition to other object types from a Palo Alto Networks firewall to your threat defense device. Ensure you review the <b>URL Objects</b> tab in the <b>Objects</b> window in <b>Optimize, Review and Validate Configuration</b> page during migration. See <a href="#">Optimize, Review, and Validate the Configuration</a> for more information.</li> </ul> <p><b>Check Point Firewall to Cisco Secure Firewall Threat Defense Migration</b></p> <ul style="list-style-type: none"> <li>You can now migrate port objects, FQDN objects, and object groups from a Check Point Firewall to your threat defense device. Review the <b>Objects</b> window in <b>Optimize, Review and Validate Configuration</b> page during migration. See <a href="#">Optimize, Review, and Validate the Configuration</a> for more information.</li> </ul>



Version	Supported Features
6.0	

Version	Supported Features
	<p>This release includes the following new features and enhancements:</p> <p><b>Cisco Secure Firewall ASA to Cisco Secure Firewall Threat Defense Migration</b></p> <ul style="list-style-type: none"> <li>• You can now migrate WebVPN configurations on your Secure Firewall ASA to Zero Trust Access Policy configurations on a threat defense device. Ensure that you check the <b>WebVPN</b> checkbox in <b>Select Features</b> page and review the new <b>WebVPN</b> tab in the <b>Optimize, Review and Validate Configuration</b> page. The threat defense device and the target management center must be running on Version 7.4 or later and must be operating Snort3 as the detection engine.</li> <li>• You can now migrate Simple Network Management Protocol (SNMP) and Dynamic Host Configuration Protocol (DHCP) configurations to a threat defense device. Make sure that you check the <b>SNMP</b> and <b>DHCP</b> checkboxes in the <b>Select Features</b> page. If you have configured DHCP on your Secure Firewall ASA, note that the DHCP server, or relay agent and DDNS configurations can also be selected to be migrated.</li> <li>• You can now migrate the equal-cost multipath (ECMP) routing configurations when performing a multi-context ASA device to a single-instance threat defense merged context migration. The <b>Routes</b> tile in the parsed summary now includes ECMP zones also, and you can validate the same under the <b>Routes</b> tab in the <b>Optimize, Review and Validate Configuration</b> page.</li> <li>• You can now migrate dynamic tunnels from the dynamic virtual tunnel interface (DVTI) configurations from your Secure Firewall ASA to a threat defense device. You can map them in the <b>Map ASA Interfaces to Security Zones, Interface Groups, and VRFs</b> page. Ensure that your ASA Version is 9.19 (x) and later for this feature to be applicable.</li> </ul> <p><b>FDM-managed Device to Cisco Secure Firewall Threat Defense Migration</b></p> <ul style="list-style-type: none"> <li>• You can now migrate the Layer 7 security policies including SNMP and HTTP, and malware and file policy configurations from your FDM-managed device to a threat defense device. Ensure that the target management center Version is 7.4 or later and that <b>Platform Settings</b> and <b>File and Malware Policy</b> checkboxes in <b>Select Features</b> page are checked.</li> </ul> <p><b>Check Point Firewall to Cisco Secure Firewall Threat Defense Migration</b></p> <ul style="list-style-type: none"> <li>• You can now migrate the site-to-site VPN (policy-based) configurations on your Check Point firewall to a threat defense device. Note that this feature applies to Check Point R80 or later versions, and management center and threat defense Version 6.7 or later. Ensure that the <b>Site-to-Site VPN Tunnels</b> checkbox is checked in the <b>Select Features</b> page. Note that, because this is a device-specific configuration, the migration tool does not display these configurations if you choose to <b>Proceed without FTD</b>.</li> </ul> <p><b>Fortinet Firewall to Cisco Secure Firewall Threat Defense Migration</b></p> <ul style="list-style-type: none"> <li>• You can now optimize your application access control lists (ACLs) when migrating configurations from a Fortinet firewall to your threat defense device.</li> </ul>

Version	Supported Features
	<p>Use the <b>Optimize ACL</b> button in the <b>Optimize, Review and Validate Configuration</b> page to see the list of redundant and shadow ACLs and also download the optimization report to see detailed ACL information.</p>
5.0.1	<p>This release includes the following new features and enhancements:</p> <ul style="list-style-type: none"> <li>• The Secure Firewall migration tool now supports migration of multiple transparent firewall-mode security contexts from Secure Firewall ASA devices to threat defense devices. You can merge two or more transparent firewall-mode contexts that are in your Secure Firewall ASA device to a transparent-mode instance and migrate them.</li> </ul> <p>In a VPN-configured ASA deployment where one or more of your contexts have VPN configurations, you can choose only one context whose VPN configuration you want to migrate to the target threat defense device. From the contexts that you have not selected, only the VPN configuration is ignored and all other configurations are migrated.</p> <p>See <a href="#">Select the ASA Security Context</a> for more information.</p> <ul style="list-style-type: none"> <li>• You can now migrate site-to-site and remote access VPN configurations from your Fortinet and Palo Alto Networks firewalls to threat defense using the Secure Firewall migration tool. From the <b>Select Features</b> pane, select the VPN features that you want to migrate. See the Specify Destination Parameters for the Secure Firewall Migration Tool section in <a href="#">Migrating Palo Alto Networks Firewall to Secure Firewall Threat Defense with the Migration Tool</a> and <a href="#">Migrating Fortinet Firewall to Secure Firewall Threat Defense with the Migration Tool</a> guides.</li> <li>• You can now select one or more routed or transparent firewall-mode security contexts from your Secure Firewall ASA devices and perform a single-context or multi-context migration using the Secure Firewall migration tool.</li> </ul>

Version	Supported Features
5.0	<ul style="list-style-type: none"> <li>• Secure Firewall migration tool now supports migration of multiple security contexts from Secure Firewall ASA to threat defense devices. You can choose to migrate configurations from one of your contexts or merge the configurations from all your routed firewall mode contexts and migrate them. Support for merging configurations from multiple transparent firewall mode contexts will be available soon. See <a href="#">Select the ASA Primary Security Context</a> for more information.</li> <li>• The migration tool now leverages the virtual routing and forwarding (VRF) functionality to replicate the segregated traffic flow observed in a multi-context ASA environment, which will be part of the new merged configuration. You can check the number of contexts the migration tool has detected in a new <b>Contexts</b> tile and the same after parsing, in a new <b>VRF</b> tile in the <b>Parsed Summary</b> page. In addition, the migration tool displays the interfaces to which these VRFs are mapped, in the <b>Map Interfaces to Security Zones and Interface Groups</b> page.</li> <li>• You can now try the whole migration workflow using the new demo mode in Secure Firewall migration tool and visualize how your actual migration looks like. See <a href="#">Using the Demo Mode in Firewall Migration Tool</a> for more information.</li> <li>• With new enhancements and bug fixes in place, Secure Firewall migration tool now provides an improved, faster migration experience for migrating Palo Alto Networks firewall to threat defense.</li> </ul>
4.0.3	<p>The Secure Firewall migration tool 4.0.3 includes bug fixes and the following new enhancements:</p> <ul style="list-style-type: none"> <li>• The migration tool now offers an enhanced <b>Application Mapping</b> screen for migrating PAN configurations to threat defense. See <a href="#">Map Configurations with Applications</a> in <i>Migrating Palo Alto Networks Firewall to Secure Firewall Threat Defense with the Migration Tool</i> guide for more information.</li> </ul>
4.0.2	<p>The Secure Firewall migration tool 4.0.2 includes the following new features and enhancements:</p> <ul style="list-style-type: none"> <li>• Secure Firewall migration tool 4.0.2 introduces the inbuilt configuration extractor tool, which is now displayed on the <b>Extract Config Information</b> page. This eases configuration extraction and eliminates the task of downloading the extractor tool. Note that the FMT-CP-Config-Extractor tool is no longer available as a stand-alone application to download. See <a href="#">Export Device Configuration using Configuration Extractor</a> for more information.</li> <li>• The migration tool now has an always-on telemetry; however, you can now choose to send limited or extensive telemetry data. Limited telemetry data includes few data points, whereas extensive telemetry data sends a more detailed list of telemetry data. You can change this setting from <b>Settings &gt; Send Telemetry Data to Cisco?</b>.</li> </ul>

Version	Supported Features
4.0.1	<p>The Secure Firewall migration tool 4.0.1 includes the following new features and enhancements:</p> <ul style="list-style-type: none"> <li>• You can now migrate Check Point R81 configuration to Secure Firewall Threat Defense.</li> <li>• You can now choose to add a <b>Virtual System ID</b> when connecting to the Check Point Security Gateway, for exporting configuration from a multi-domain Virtual System Extension (VSX) deployment.</li> <li>• You can extract configuration from a Check Point VSX version R77 by executing a few commands manually. See <a href="#">Export Device Configuration Using FMT-CP-Config-Extractor_v4.0-7965 Tool</a> in the <i>Migrating Check Point Firewall to Threat Defense with the Migration Tool</i> guide for detailed information.</li> </ul>
3.0.1	<ul style="list-style-type: none"> <li>• For ASA with FirePOWER Services, Check Point, Palo Alto Networks, and Fortinet, Secure Firewall 3100 series is only supported as a destination device.</li> </ul>
3.0	<p>The Secure Firewall migration tool 3.0 provides support to migrate to Cloud-delivered Firewall Management Center from Check Point if the destination management center is 7.2 or later.</p>
2.5.2	<p>The Secure Firewall migration tool 2.5.2 provides support to identify and segregate ACLs that can be optimized (disabled or deleted) from the firewall rule base without impacting the network functionality from Check Point Firewalls.</p> <p>The ACL Optimization supports the following ACL types:</p> <ul style="list-style-type: none"> <li>• Redundant ACL—When two ACLs have the same set of configurations and rules, then removing the non-base ACL will not impact the network.</li> <li>• Shadow ACL—The first ACL completely shadows the configurations of the second ACL.</li> </ul> <p><b>Note</b> Optimization is available for the Check Point only for ACP rule action.</p> <p>The Secure Firewall migration tool 2.5.2 supports Border Gateway Protocol (BGP) and Dynamic-Route Objects migration if the destination management center is 7.1 or later.</p>

Version	Supported Features
2.2	<ul style="list-style-type: none"> <li>• Provides support for r80 Check Point OS versions</li> <li>• Provides support for Live Connect to extract configurations from Check Point (r80) devices.</li> <li>• You can migrate the following supported Check Point configuration elements to threat defense for r80: <ul style="list-style-type: none"> <li>• Interfaces</li> <li>• Static Routes</li> <li>• Objects</li> <li>• Network Address Translation</li> <li>• Access Control Policies <ul style="list-style-type: none"> <li>• Global Policy—When you select this option, the source, and destination zones of the ACL policy are migrated as <b>Any</b> because there is no route-lookup.</li> <li>• Zone-Based Policy—When you select this option, source, and destination zones are derived based on the predicative route-lookup through routing mechanism for the source and destination network objects or groups.</li> </ul> </li> </ul> </li> </ul> <p><b>Note</b> Route-lookup is limited to Static routes and Dynamic routes (excluding PBR and NAT) only, and depending on the nature of the source and destination Network Object-Groups, this operation may result in rule explosion.</p> <p><b>Note</b> IPv6 route-lookup for zone-based policy is unsupported.</p>

Version	Supported Features
2.0	<ul style="list-style-type: none"> <li>• The new optimization functionality in the Secure Firewall migration tool allows you to fetch the migration results quickly using the Search filters.</li> <li>• The Secure Firewall migration tool allows you to migrate the following supported Check Point configuration elements to threat defense: <ul style="list-style-type: none"> <li>• Interfaces</li> <li>• Static Routes</li> <li>• Objects</li> <li>• Access Control Policy <ul style="list-style-type: none"> <li>• Global Policy—When you select this option, the source, and destination zones for the ACL policy are migrated as <b>Any</b>.</li> <li>• Zone-Based Policy—When you select this option, source, and destination zones are derived based on the predicative route-lookup through routing mechanism for the source and destination network objects or groups. <p><b>Note</b> Route-lookup is limited to Static routes and Dynamic routes (excluding PBR and NAT) only, and depending on the nature of the source and destination Network Object-Groups, this operation may result in rule explosion.</p> </li> </ul> </li> <li>• Network Address Translation</li> </ul> </li> <li>• Provides support for Check Point OS versions—r75, r76, r77, r77.10, r77.20, and r77.30.</li> </ul>

## Licensing for the Secure Firewall Migration Tool

The Secure Firewall migration tool application is free and does not require license. However, the management center must have the required licenses for the related threat defense features to successfully register threat defense devices and deploy policies to it.

## Platform Requirements for the Secure Firewall Migration Tool

The Secure Firewall migration tool has the following infrastructure and platform requirements:

- Runs on a Microsoft Windows 10 64-bit operating system or on a macOS version 10.13 or higher
- Has Google Chrome as the system default browser
- (Windows) Has Sleep settings configured in Power & Sleep to Never put the PC to Sleep, so the system does not go to sleep during a large migration push

- (macOS) Has Energy Saver settings configured so that the computer and the hard disk do not go to sleep during a large migration push

## Requirements and Prerequisites for Threat Defense Devices

When you migrate to the management center, it may or may not have a target threat defense device added to it. You can migrate shared policies to a management center for future deployment to a threat defense device. To migrate device-specific policies to a threat defense, you must add it to the management center. As you plan to migrate your Check Point configuration to threat defense, consider the following requirements and prerequisites:

- The target threat defense device must be registered with the management center.
- The threat defense device can be a standalone device or a container instance. It must **not** be part of a cluster or a high availability configuration.
  - The target native threat defense device must have at least an equal number of used physical data or port channel interfaces or subinterfaces (excluding 'management-only') as that of the Check Point; if not you must add the required type of interface on the target threat defense device. Subinterfaces are created by the Secure Firewall migration tool that are based on physical or port channel mapping.
  - If the target threat defense device is a container instance, at minimum it must have an equal number of used physical interfaces, physical subinterfaces, port channel interfaces, and port channel subinterfaces (excluding 'management-only') as that of the Check Point; if not you must add the required type of interface on the target threat defense device.




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### Note

- Subinterfaces are not created by the Secure Firewall migration tool, only interface mapping is allowed.
  - Mapping across different interface types is allowed, for example: physical interface can be mapped to a port channel interface.
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## Check Point Configuration Support

### Supported Check Point Configurations

- Interfaces (Physical, VLAN, and Bond interfaces)
- Network objects and groups: Secure Firewall migration tool supports migrating all the Check Point network objects to the threat defense
- Service objects
- Network Address Translation
- IPv6 conversion support (Interface, Static Routes, and Objects) and except zone-based ACLs with IPv6
- Access rules that are applied globally and support to convert Global ACLs to Zone-based ACLs



- Static routes, except for the routes configured with scope as local, and with logical interfaces as the egress interface for a static route without the next-hop IP address
- ACL with an additional logging type
- Policy-based site-to-site VPN for Check Point R80 and later versions: IPv4 and preshared key (PSK)-based authentication. We recommend that you use the **Live Connect** option to migrate VPN configurations.



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**Note** For the ACEs configured in Check Point that have corresponding NAT rules in Check Point, the Secure Firewall migration tool does not map the real IP addresses against the translated IP addresses in the corresponding migrated ACE rules. Secure Firewall migration tool does not map the IP addresses because of the lack of reference information for the ACE rule against the NAT rule. So, during the validation of the migrated ACE and NAT configuration on the management center, you must validate and manually make changes to the ACE rules corresponding to the threat defense packet flow.

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**Note** Though the Secure Firewall migration tool does not migrate service objects (configured with a source and destination, and a port combination with the same type of object that is called in an object group), referenced ACL rules are migrated with full functionality.

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For more information on Unsupported Check Point Configuration, see [Unsupported Check Point Configuration](#).

### Partially Supported Check Point Configurations

The Secure Firewall migration tool partially supports the following Check Point configurations for migration. Some of these configurations include rules with advanced options that can be migrated without those options. If the management center supports those advanced options, you can configure them manually after the migration is complete.

- Static routes with rank and ping parameters are partially migrated.
- Bond interface with mode, XOR, active backup, round-robin types are partially migrated to LACP type in management center by the Secure Firewall migration tool.
- Alias interface configurations part of parent interfaces like physical or bond Interface, alias interface configuration is ignored and parent interface attributes are migrated as is.
- Network object group of type exclusion is supported through an ACL to keep the meaning intact.
- ACL with Add logging type and ACL with Time range.

### Unsupported Check Point Configurations

The Secure Firewall migration tool does not support the following Check Point configurations. If these configurations are supported in the management center, you can configure them manually after the migration is complete.

- Alias, Bridge, 6IN4 tunnel, loopback, and PPPoE interfaces
- Network objects and groups:
  - UTM-1 Edge gateway

- Check Point host
- Gateway cluster
- Externally Managed Gateways or Hosts
- Open Security Extension (OSE) device
- Logical servers
- Dynamic objects
- VoIP domains
- Zone
- CP security gateway
- CP management server
- Network Object group of the exclusion type
- Service objects:
  - RPC
  - DCE-RPC
  - Compound TCP
  - GTP
  - Other Check Point Specific service objects
- ACL policies with:
  - Unsupported ACE action types (Client Auth, Session Auth, User Auth, and other custom authentication types) are migrated with the Allow action type, but in a disabled state
  - Identity-based ACL policies
  - Zone-based policy with IPv6 route-lookup
  - User-based access control policy rules
  - Global Multi-Domain System rules cannot be migrated




---

**Note** The configurations from the Global Multi-domain system in Check Point multi-domain deployment cannot be exported. Hence the configurations pertaining to specific CMAs can only be exported and migrated.

---

- Objects with an Unsupported ICMP type and code
- Tunneling protocol-based access control policy rules
- Implied ACL rules

- ACE with negate parameters
- Zones for ACE when zone-based ACE is selected and has the range object with value more than 100 is migrated and are marked as **Any** with no-lookup that is appended to the ACE name and appropriate comment
- Zone for ACE with IPv6 address when zone-based ACE selected is marked as **Any** and the ACE unsupported with an appropriate comment.

### Unsupported NAT Rules

The Secure Firewall migration tool does not provide support for the following NAT rules:

- Auto NAT rules that hide behind the gateway
- Manual NAT rule using Check Point Security Gateway.
- Manual NAT rule containing Network Objects with Dual Type IP Address
- Manual NAT rules containing an object-group of which the inherited object has IPv6 configuration
- Manual NAT rule with a service group
- IPv6 NAT rules

### Unsupported Static Routes

- Static routes when no egress interface is found in **netstat -rnv**
- Static routes that have the logical gateway as exit interface
- Static routes of ECMP types
- Static routes that have the local scope attribute as exit interface

## Guidelines and Limitations

During conversion, the Secure Firewall migration tool creates a one-to-one mapping for all supported objects and rules, whether they are used in a rule or policy. However, the Secure Firewall migration tool provides an optimization feature, that allows you to exclude migration of unused objects (objects that are not referenced in any ACLs).

The Secure Firewall migration tool deals with unsupported objects and rules as specified:

- Unsupported objects and routes are not migrated.
- Unsupported ACL rules are migrated as disabled rules into the management center.

### Check Point Configuration Limitations

Migration of the source Check Point configuration has the following limitations:

- The system configuration is not migrated.
- Live Connect of Firewall is supported only for Check Point (r80) and later versions.

- All the Security Policies that are explicit (available in `Security_Policy.xml` for r77.30 and earlier versions and under Security Policy File for r80 and later versions) are migrated to the ACP on the management center. The rules on a Check Point Smart dashboard are not migrated because implied rules are not part of the exported configuration.

**Note**

- For Check Point (r80) and later versions, if there is a separate Application Layer Policy attached to the L4 Security Layer Policy, the Secure Firewall migration tool migrates them as **unsupported**. Also, in such cases, there will be two files with ACE configurations: one for the security layer and the other for the application layer. The Secure Firewall migration tool migrates based on the priority information available in the access layer, in the `index.json` of the configuration zip file.
  - For Check Point versions r80 and later, which have the Multi-Domain Deployment setup, and, which have a Global Policy along with Customer-Managed Add-on (CMA) specific policy, the order in which the Secure Firewall migration tool migrates the Check Point configuration will be slightly different from the order in the source configuration. Also, in such cases, there will be two files with ACE configurations: one for the Global Policy, and the other for the CMA policy. ACEs configured under the Domain Layer will be migrated as **unsupported**.
  - The definition of the order of ACE rules, configured for a CMA that has Action as the Domain Layer in the multi-domain system, is incomplete in the extracted configuration. So, if you have a Global policy attached to a specific CMA policy in the source configuration, validate the rule number index in the extracted configuration to ensure that it is in the correct order.
- 
- Some of the Check Point configurations, such as Dynamic Routing and VPN to threat defense cannot be migrated using the Secure Firewall migration tool. Migrate these configurations manually.
  - Check Point bridge, tunnel, and alias interfaces to management center cannot be migrated.
  - Nested service object-groups or port group are not supported on the management center. As part of conversion, the Secure Firewall migration tool expands the content of the referenced nested object-group or port group.
  - The Secure Firewall migration tool splits the service objects or groups with source and destination ports that are configured within the same object. References to such access control rules are converted into management center rules with the exact same meaning.

**Check Point Migration Guidelines**

The migration of the Check Point log option follows the best practices for threat defense. The log option for a rule is enabled or disabled based on the source Check Point configuration. For rules with **drop** or **reject** action, the Secure Firewall migration tool configures logging at the beginning of the connection. If the action is **permit**, the Secure Firewall migration tool configures logging at the end of the connection.

## Object Migration Guidelines

Service objects, which are called port objects in the threat defense have different configuration guidelines for objects. For example, one or more service objects can have the same name in Check Point with one object name in lowercase and the other object name in uppercase. But, each object must have a unique name, regardless of the case as in the threat defense. The Secure Firewall migration tool analyzes all Check Point objects and handles their migration to threat defense in one of the following ways:

- Each Check Point object has a unique name and configuration. The Secure Firewall migration tool migrates the objects successfully without changes.
- The name of a Check Point service object includes one or more special characters that are not supported by management center. The Secure Firewall migration tool renames the special characters in the object name with a "\_" character to meet the management center object naming criteria.
- A Check Point service object has the same name and configuration as an existing object in management center. The Secure Firewall migration tool reuses the management center object for the threat defense configuration and does not migrate the Check Point object.
- A Check Point service object has the same name but a different configuration than an existing object in the management center. The Secure Firewall migration tool reports object conflict and allows you to resolve the conflict by adding a unique suffix to the name of the Check Point Service object for migration purposes.
- Multiple Check Point service objects have the same name but in different cases. The Secure Firewall migration tool renames such objects to meet the threat defense object naming criteria.

## Guidelines and Limitations for Threat Defense Devices

As you plan to migrate your Check Point configuration to threat defense, consider the following guidelines and limitations:

- If there are any existing device-specific configurations on the threat defense such as routes, interfaces, and so on, during the push migration, the Secure Firewall migration tool cleans the device automatically and overwrites from the Check Point configuration.



---

**Note** To prevent any undesirable loss of device (target threat defense) configuration data, we recommend you to manually clean the device before migration.

---

During migration, the Secure Firewall migration tool resets the interface configuration. If you use these interfaces in policies, the Secure Firewall migration tool cannot reset them and hence the migration fails.

- The Secure Firewall migration tool can create subinterfaces on the native instance of the threat defense device based on the Check Point configuration. Manually create interfaces and port channel interfaces on the target threat defense device before starting migration. For example, if your Check Point configuration is assigned with the following interfaces and port channels, you must create them on the target threat defense device before the migration:
  - Five physical interfaces
  - Five port channels
  - Two management-only interfaces



---

**Note** For container instances of threat defense devices, subinterfaces are not created by the Secure Firewall migration tool, only interface mapping is allowed.

---

## Supported Platforms for Migration

The following Check Point and threat defense platforms are supported for migration with the Secure Firewall migration tool. For more information about the supported threat defense platforms, see [Cisco Secure Firewall Compatibility Guide](#).



---

**Note** The Secure Firewall migration tool supports migration of standalone mode or distributed Check Point configuration to a standalone threat defense device only.

---

### Supported Target Threat Defense Platforms

You can use the Secure Firewall migration tool to migrate a source Check Point configuration to the following standalone or container instance of the threat defense platforms:

- Firepower 1000 Series
- Firepower 2100 Series
- Secure Firewall 3100 Series
- Firepower 4100 Series
- Secure Firewall 4200 Series
- Firepower 9300 Series that includes:
  - SM-24
  - SM-36
  - SM-40
  - SM-44
  - SM-48
  - SM-56
- Threat Defense on VMware, deployed using VMware ESXi, VMware vSphere Web Client, or vSphere standalone client
- Threat Defense Virtual on Microsoft Azure Cloud or AWS Cloud



- 
- Note**
- For pre-requisites and pre-staging of threat defense virtual in Azure, see [Getting Started with Secure Firewall Threat Defense Virtual](#) and Azure.
  - For pre-requisites and pre-staging of threat defense virtual in AWS Cloud, see [Threat Defense Virtual Prerequisites](#).
- 

For each of these environments, once pre-staged as per the requirements, the Secure Firewall migration tool requires network connectivity to connect to the management center in Microsoft Azure or AWS Cloud, and then migrate the configuration to the management center in the Cloud.



- 
- Note** The pre-requisites of pre-staging the management center or threat defense virtual is required to be completed before using the Secure Firewall migration tool, to have a successful migration.
- 



- 
- Note** The Secure Firewall migration tool requires network connectivity to any devices hosted in the cloud to either extract the source configuration (CP (r80) Live Connect) or migrate the manually uploaded configuration to the management center in the cloud. Hence, as a pre-requisite, IP network connectivity is required to be pre-staged before using the Secure Firewall migration tool.
- 

## Supported Target Management Center for Migration

The Secure Firewall migration tool supports migration to threat defense devices managed by the management center and cloud-delivered Firewall Management Center.

### Management Center

The management center is a powerful, web-based, multi-device manager that runs on its own server hardware, or as a virtual device on a hypervisor. You can use both On-Prem and Virtual management center as a target management center for migration.

The management center should meet the following guidelines for migration:

- The Management Center software version that is supported for migration, as described in [Supported Software Versions for Migration, on page 20](#).
- The management center software version that is supported for migration for Check Point is 6.2.3.3 and later.
- You have obtained and installed smart licenses for threat defense that include all features that you plan to migrate from the Check Point interface, as described in the following:
  - The Getting Started section of [Cisco Smart Accounts](#) on Cisco.com.
  - [Register the Firewall Management Center with the Cisco Smart Software Manager](#).

- [Licensing the Firewall System](#)
- You have enabled management center for REST API.

On the management center web interface, navigate to **System > Configuration > Rest API Preferences > Enable Rest API** and check the **Enable Rest API** check box.




---

**Important** You need to have an administrator user role in management center to enable REST API. For more information on management center user roles, see [User Roles](#).

---

### Cloud-Delivered Firewall Management Center

The cloud-delivered Firewall Management Center is a management platform for threat defense devices and is delivered via Cisco Defense Orchestrator. The cloud-delivered Firewall Management Center offers many of the same functions as a management center.

You can access the cloud-delivered Firewall Management Center from CDO. CDO connects to cloud-delivered Firewall Management Center through the Secure Device Connector (SDC). For more information about cloud-delivered Firewall Management Center, see [Managing Cisco Secure Firewall Threat Defense Devices with Cloud-Delivered Firewall Management Center](#).

The Secure Firewall migration tool supports cloud-delivered Firewall Management Center as a destination management center for migration. To select the cloud-delivered Firewall Management Center as destination management center for migration, you need to add the CDO region and generate the API token from CDO portal.

### CDO Regions

CDO is available in three different regions and the regions can be identified with the URL extension.

*Table 1: CDO Regions and URL*

Region	CDO URL
Europe Region	<a href="https://defenseorchestrator.eu/">https://defenseorchestrator.eu/</a>
US Region	<a href="https://defenseorchestrator.com/">https://defenseorchestrator.com/</a>
APJC Region	<a href="https://www.apj.cdo.cisco.com/">https://www.apj.cdo.cisco.com/</a>

## Supported Software Versions for Migration

The following are the supported Secure Firewall migration tool, Check Point and threat defense versions for migration:



### Supported Secure Firewall Migration Tool Versions

The versions posted on [software.cisco.com](https://software.cisco.com) are the versions formally supported by our engineering and support organizations. We strongly recommend you download the latest version of Secure Firewall migration tool from [software.cisco.com](https://software.cisco.com).

### Supported Check Point Versions

The Secure Firewall migration tool supports migration to threat defense that is running Check Point OS version r75-r77.30 and r80-r80.40. Select the appropriate Check Point version in the **Select Source** page.

The Secure Firewall migration tool supports migration from the Check Point Platform Gaia and Virtual System Extension (VSX) deployments.

### Supported Management Center Versions for source Check Point Firewall Configuration

For Check Point firewall, the Secure Firewall migration tool supports migration to a threat defense device managed by a management center that is running version 6.2.3.3 or later.



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**Note** The migration to 6.7 threat defense device is currently not supported. Hence, migration may fail if the device is configured with data interface for management center access.

---

### Supported Threat Defense Versions

The Secure Firewall migration tool recommends migration to a device that is running threat defense version 6.5 and later.

For detailed information about the Cisco Firewall software and hardware compatibility, including operating system and hosting environment requirements, for threat defense, see the [Cisco Firewall Compatibility Guide](#).





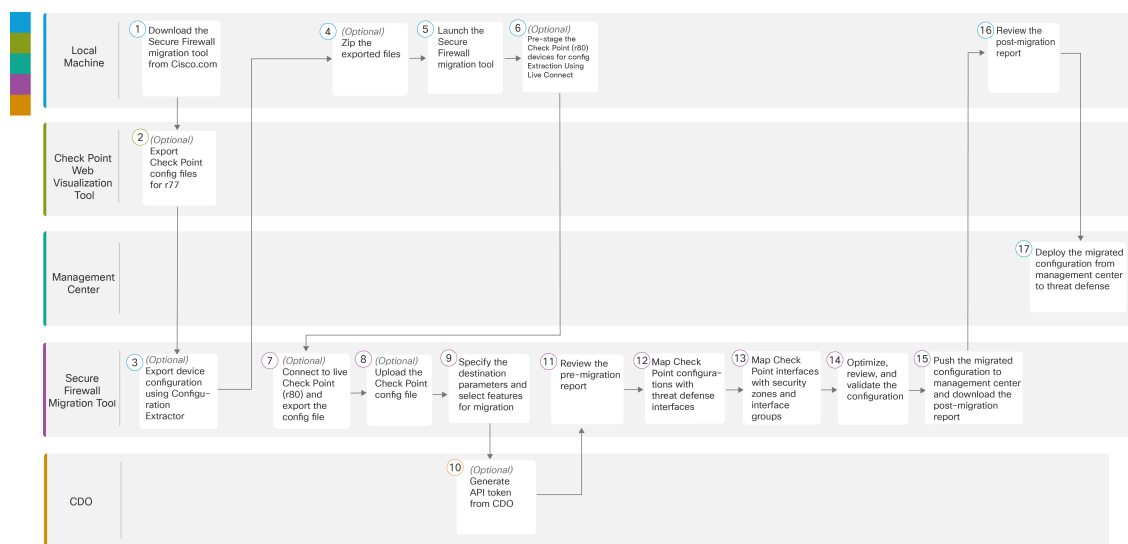
# CHAPTER 2

## Check Point to Threat Defense Migration Workflow

- End-to-End Procedure, on page 23
- Prerequisites for Migration, on page 25
- Run the Migration, on page 29
- Uninstall the Secure Firewall Migration Tool, on page 54
- Sample Migration: Check Point to Threat Defense 2100 , on page 55

### End-to-End Procedure

The following flowchart illustrates the workflow for migrating a Check Point firewall to threat defense using the Secure Firewall migration tool.



	Workspace	Steps
1	Local Machine	Download the latest version of Secure Firewall migration tool from Cisco.com. For detailed steps, see <a href="#">Download the Secure Firewall Migration Tool from Cisco.com</a> .

	Workspace	Steps
2	Check Point Web Visualization Tool	(Optional) Export the Check Point configuration file for r77: To export the Check Point configuration files for r77, see <a href="#">Export the Check Point Configuration Files for r77, on page 26</a> . If you intend to export configuration files for r80 using Secure Firewall migration tool live connect feature, skip to step 5.
3	Local Machine	Launch the Secure Firewall migration tool on your local machine and select <b>Check Point (r75–r77)</b> or <b>Check Point (r80–r81)</b> in the <b>Source Firewall Vendor</b> drop-down, based on your requirement. See <a href="#">Launch the Secure Firewall Migration Tool</a> for more information.
4	Secure Firewall Migration Tool	(Optional) Export device configuration from Check Point (r75–r77): To export device configuration for r77 using <b>Configuration Extractor</b> through a secure gateway connection, see <a href="#">Export Device Configuration Using Configuration Extractor, on page 27</a> .
5	Local Machine	(Optional) Zip the exported files: select all the exported configuration files for r77 and compress them to a zip file. For detailed steps, see <a href="#">Zip the Exported Files</a> .
6	Local Machine	Pre-stage the Check Point (r80) devices for config Extraction: You must configure the credentials on the Check Point (r80) devices before using Live Connect on the Firewall. For pre-staging credentials on Check Point (r80) devices, see <a href="#">Pre-Stage the Check Point (r80) Devices for Configuration Extraction Using Live Connect</a> . This step is only required if you are planning to migrate configuration files for r80 devices. If you have planning to migrate configuration for r77 devices, skip to step 8.
7	Secure Firewall Migration Tool	(Optional) Connect to live Check Point (r80) and export the config file: To export the Check Point configuration files for r80 using live connect feature, see <a href="#">Procedure to Export the Check Point Configuration Files for r80</a> .
8	Secure Firewall Migration Tool	(Optional) Upload the Check Point config file: For detailed steps for uploading Check Point Configuration file, see <a href="#">Upload the Check Point Configuration File</a> .
9	Secure Firewall Migration Tool	During this step, you can specify the destination parameters for the migration. For detailed steps, see <a href="#">Specify Destination Parameters for the Secure Firewall Migration Tool</a> .
10	CDO	(Optional) This step is optional and only required if you have selected cloud-delivered Firewall Management Center as destination management center. For detailed steps, see <a href="#">Specify Destination Parameters for the Secure Firewall Migration Tool</a> .
11	Secure Firewall Migration Tool	Navigate to where you downloaded the pre-migration report and review the report. For detailed steps, see <a href="#">Review the Pre-Migration Report</a> .
12	Secure Firewall Migration Tool	The Secure Firewall migration tool allows you to map the Check Point configuration with threat defense interfaces. For detailed steps, see <a href="#">Map Check Point Firewall Configurations with Threat Defense Interfaces</a> .

	Workspace	Steps
13	Secure Firewall Migration Tool	To ensure that the Check Point configuration is migrated correctly, map the Check Point interfaces to the appropriate threat defense interface objects, security zones and interface groups. For detailed steps, see <a href="#">Map Check Point Interfaces to Security Zones and Interface Groups</a> .
14	Secure Firewall Migration Tool	Optimize and review the configuration carefully and validate that it is correct and matches how you want to configure the threat defense device. For detailed steps, see <a href="#">Optimize, Review and Validate the Configuration</a> .
15	Secure Firewall Migration Tool	This step in the migration process sends the migrated configuration to management center and allows you to download the post-migration report. For detailed steps, see <a href="#">Push the Migrated Configuration to Management Center</a> .
16	Local Machine	Navigate to where you downloaded the post migration report and review the report. For detailed steps, see <a href="#">Review the Post-Migration Report for Check Point and Complete the Migration</a> .
17	Management Center	Deploy the migrated configuration from the management center to threat defense. For detailed steps, see <a href="#">Review the Post-Migration Report for Check Point and Complete the Migration</a> .

## Prerequisites for Migration

Before you migrate your Check Point configuration, execute the following activities:

### Download the Secure Firewall Migration Tool from Cisco.com

#### Before you begin

You must have a Windows 10 64-bit or macOS version 10.13 or higher machine with an internet connectivity to Cisco.com.

- 
- Step 1** On your computer, create a folder for the Secure Firewall migration tool.
- We recommend that you do not store any other files in this folder. When you launch the Secure Firewall migration tool, it places the logs, resources, and all other files in this folder.
- Note** Whenever you download the latest version of the Secure Firewall migration tool, ensure, you create a new folder and not use the existing folder.
- Step 2** Browse to <https://software.cisco.com/download/home/286306503/type> and click **Firewall Migration Tool**.
- The above link takes you to the Secure Firewall migration tool under Firewall NGFW Virtual. You can also download the Secure Firewall migration tool from the threat defense device download areas.
- Step 3** Download the most recent version of the Secure Firewall migration tool into the folder that you created.

Download the appropriate executable of the Secure Firewall migration tool for Windows or macOS machines.

### What to do next

[Export the Check Point Configuration Files](#)

## Export the Check Point Configuration Files

You can export the Check Point Configuration for the following:

- [Export the Check Point Configuration Files for r77](#)
- [Export the Check Point Configuration Files for r80](#)

### Export the Check Point Configuration Files for r77

To export the Check Point configuration files for r77, perform the following:

- [Export the Configuration Using Check Point Web Visualization Tool \(WVT\)](#)
- [Export Device Configuration Using Configuration Extractor, on page 27](#)
- [Zip the Exported Files](#)

### Export the Configuration Using Check Point Web Visualization Tool (WVT)

- Step 1** Open the command prompt on the workstation that has access to the Check Point Management Server.
- Step 2** Download WVT from the [Check Point Portal](#) appropriate for the Check Point Firewall version.
- Step 3** Unzip the WVT zip file.
- Step 4** Create a new sub folder under the same root folder where the Check Point WVT tool is extracted.
- Step 5** Change the directory on the command prompt to the directory where WVT is stored and execute the following commands:

```
C:\Web_Visualisation_Tool> cpdb2web.exe [-s management_server] [-u admin_name | -a certificate_file]
[-p password] [-o output_file_path] [-t table_names] [-c | -m gateway | -l package_names] [-gr] [-go]
[-w Web_Visualization_Tool_installation_directory]
```

For example,

```
C:\Web_Visualisation_Tool> cpdb2web.exe -s 172.16.0.1 -u admin -p admin123 -o Outputs
```

A total of seven files are created in the *Outputs* directory when these commands are executed, where:

Command	Description
C:\Web_Visualisation_Tool	The root directory for the WVT tool.
172.16.0.1	The IP Address of the Check Point Management Server.
admin	The Check Point Management Server username.
Admin123	The Check Point Management Server password.

Command	Description
Outputs	The relative path to store output files.

**Note** The name of the Security Policy and NAT Policy file must be `Security_Policy.xml` and `NAT_Policy.xml` respectively. If the filenames are different, rename them manually.

If there are multiple Security and NAT Policy files, ensure that you select and keep only the `Security_Policy.xml` and `NAT_Policy.xml` files of the Check Point device that you want to migrate.

### What to do next

[Export Device Configuration Using Configuration Extractor](#)

## Export Device Configuration Using Configuration Extractor

- Step 1** In the **Select Source Configuration** page, choose **Check Point (r75–r77)** and click **Start Migration**.
- Step 2** On the **Configuration Extractor** pane, click **Connect** to the Check Point Security Gateway for which the policies are to be migrated using the Secure Firewall migration tool.
- To connect, you require the following information:
- IP Address
  - Port
  - Admin Username
  - Admin Password
  - Expert Password
  - (Optional) Virtual ID Number
- Step 3** Wait until you see a `networking.txt` file downloaded to your local machine.
- The following commands are executed in the background by the configuration extractor and is downloaded as the `networking.txt` file:
- **show hostname**
  - **show version product**
  - **show interfaces**
  - **fw vsx stat**
  - **show management interface**
  - **show configuration bonding**
  - **show configuration bridging**
  - **show configuration interface**
  - **show configuration static-route**

- **show ipv6-state**
- **show configuration ipv6 static-route**
- **netstat -rnv**

For example, 172.16.0.1 is the IP address of Check Point Firewall Gateway for which the policies are to be migrated.

**Step 4** If you are trying to export configuration from a Check Point VSX (Virtual System eXtension) version R77 having a virtual ID, the following commands are executed in the background:

- **show hostname**
- **show version product**
- **show interfaces**
- **fw vsx stat**
- **fw vsx stat <vsid>**
- **set virtual system <vsid>**

**Tip** vsid indicates the virtual system ID.

- **fw getifs**
- **show management interface**
- **show configuration bonding**
- **show configuration bridging**
- **show configuration interface**
- **show configuration static-route**
- **show ipv6-state**
- **show configuration ipv6 static-route**
- **netstat -rnv**

**Step 5** Move the .txt file to the `Outputs` folder.

---

### What to do next

[Zip the Exported Files](#)

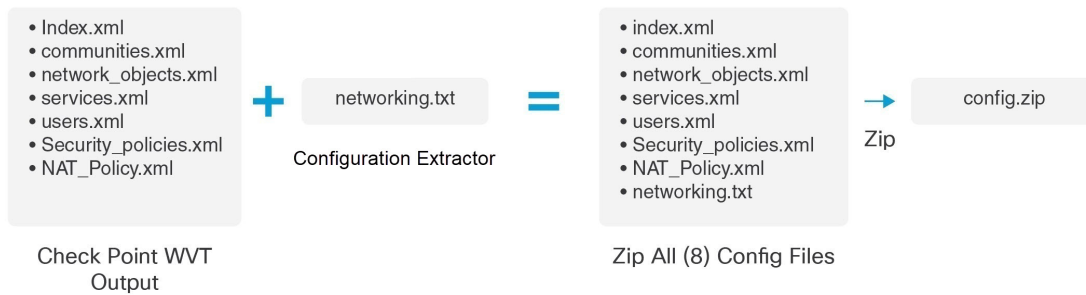
### Zip the Exported Files

---

Select all the eight files (seven from the Web Visualization Tool (WVT) and one .txt file from the Configuration Extractor) and compress them to a zip file.

**Note** Before you zip the files for migration, ensure that the `Security_Policy.xml` and `NAT_Policy.xml` files are for the Check Point device that you want to migrate to the threat defense.





**Note** .tar or other compressed file types are not supported.

### What to do next

[Upload the Check Point Configuration File](#)

## Run the Migration

### Launch the Secure Firewall Migration Tool

This task is applicable only if you are using the desktop version of the Secure Firewall migration tool. If you are using the cloud version of the migration tool hosted on CDO, skip to [Upload the Check Point Configuration File](#).



**Note** When you launch the Secure Firewall migration tool a console opens in a separate window. As you go through the migration, the console displays the progress of the current step in the Secure Firewall migration tool. If you do not see the console on your screen, it is most likely to be behind the Secure Firewall migration tool.

#### Before you begin

- [Download the Secure Firewall Migration Tool from Cisco.com](#)
- Review and verify the requirements in the [Supported Target Management Center for Migration, on page 19](#) section.
- Ensure that your computer has a recent version of the Google Chrome browser to run the Secure Firewall migration tool. For information on how to set Google Chrome as your default browser, see [Set Chrome as your default web browser](#).
- If you are planning to migrate a large configuration file, configure sleep settings so the system doesn't go to sleep during a migration push.

**Step 1** On your computer, navigate to the folder where you downloaded the Secure Firewall migration tool.

**Step 2** Do one of the following:

- On your Windows machine, double-click the Secure Firewall migration tool executable to launch it in a Google Chrome browser.

If prompted, click **Yes** to allow the Secure Firewall migration tool to make changes to your system.

The Secure Firewall migration tool creates and stores all related files in the folder where it resides, including the log and resources folders.

- On your Mac move, the Secure Firewall migration tool \*.command file to the desired folder, launch the Terminal application, browse to the folder where the Secure Firewall migration tool is installed and run the following commands:

```
# chmod 750 Firewall_Migration_Tool-version_number.command
# ./Firewall_Migration_Tool-version_number.command
```

The Secure Firewall migration tool creates and stores all related files in the folder where it resides, including the log and resources folders.

**Tip** When you try to open the Secure Firewall migration tool, you get a warning dialog because the Secure Firewall migration tool is not registered with Apple by an identified developer. For information on opening an application from an unidentified developer, see [Open an app from an unidentified developer](#).

**Note** Use MAC terminal zip method.

**Step 3** On the **End User License Agreement** page, click **I agree to share data with Cisco Success Network** if you want to share telemetry information with Cisco, else click **I'll do later**.

When you agree to send statistics to Cisco Success Network, you are prompted to log in using your Cisco.com account. Local credentials are used to log in to the Secure Firewall migration tool if you choose not to send statistics to Cisco Success Network.

**Step 4** On the Secure Firewall migration tool's login page, do one of the following:

- To share statistics with Cisco Success Network, click the **Login with CCO** link to log in to your Cisco.com account using your single sign-on credentials. If you do not have a Cisco.com account, create it on the Cisco.com login page.

Proceed to [step 8](#), if you have used your Cisco.com account to log in.

- If you have deployed your firewall in an air-gapped network that does not have internet access, contact Cisco TAC to receive a build that works with administrator credentials. Note that this build does not send usage statistics to Cisco, and TAC can provide you the credentials.

**Step 5** On the **Reset Password** page, enter the old password, your new password, and confirm the new password.

The new password must have 8 characters or more and must include upper and lowercase letters, numbers, and special characters.

**Step 6** Click **Reset**.

**Step 7** Log in with the new password.

**Note** If you have forgotten the password, delete all the existing data from the `<migration_tool_folder>` and reinstall the Secure Firewall migration tool.

**Step 8** Review the pre-migration checklist and make sure you have completed all the items listed.

If you have not completed one or more of the items in the checklist, do not continue until you have done so.

**Step 9** Click **New Migration**.

**Step 10** On the **Software Update Check** screen, if you are not sure you are running the most recent version of the Secure Firewall migration tool, click the link to verify the version on Cisco.com.

**Step 11** Click **Proceed**.

---

### What to do next

You can proceed to the following step:

- If you have exported Check Point configuration to your computer, proceed to [Upload the Check Point Configuration File](#).
- If you must extract information from a Check Point (r77) using the Secure Firewall migration tool, proceed to [Export the Check Point Configuration Files for r77](#).
- If you must extract information from a Check Point (r80) using the Secure Firewall migration tool, proceed to [Export the Check Point Configuration Files for r80](#).

## Using the Demo Mode in the Secure Firewall Migration Tool

When you launch the Secure Firewall Migration tool and are on the **Select Source Configuration** page, you can choose to start performing a migration using **Start Migration** or enter the **Demo Mode**.

The demo mode provides an opportunity to perform a demo migration using dummy devices and visualize how an actual migration flow would look like. The migration tool triggers the demo mode based on the selection you make in the **Source Firewall Vendor** drop-down; you can also upload a configuration file or connect to a live device and continue with the migration. You can proceed performing the demo migration by selecting demo source and target devices such as demo FMC and demo FTD devices.



---

**Caution** Choosing **Demo Mode** erases existing migration workflows, if any. If you use the demo mode while you have an active migration in **Resume Migration**, your active migration is lost and needs to be restarted from first, after you use the demo mode.

---

You can also download and verify the pre-migration report, map interfaces, map security zones, map interface groups, and perform all other actions like you would in an actual migration workflow. However, you can only perform a demo migration up to validation of the configurations. You cannot push the configurations to the demo target devices you selected because this is only a demo mode. You can verify the validation status and the summary and click **Exit Demo Mode** to go the **Select Source Configuration** page again to start your actual migration.



---

**Note** The demo mode lets you leverage the whole feature set of the Secure Firewall Migration Tool, except pushing of configurations, and do a trial run of the end-to-end migration procedure before performing your actual migration.

---

## Export the Check Point Configuration Files for r80



**Note** Export of Check Point r80 configuration is supported only with the Live Connect feature on the Secure Firewall migration tool.

To configure on the Check Point device the credentials required for migration and to export the Check Point configuration files, perform the following:

- [Pre-Stage the Check Point \(r80\) Devices for Configuration Extraction Using Live Connect](#)
- [Procedure to Export the Check Point Configuration Files for r80](#)

### Pre-Stage the Check Point (r80) Devices for Configuration Extraction Using Live Connect

You can configure the credentials on the Check Point (r80) devices before migration using any one of the following steps:

- [Export from Distributed Check Point Deployment](#)—When you have an independent Check Point Security Gateway and a Check Point Security Manager.
- [Export from Standalone Check Point Deployment](#)—When you have a Check Point Security Gateway and a Check Point Security Manager as one single device.
- [Export from Multi-Domain Check Point Deployment](#)—When you have a Check Point Security Gateway and a Check Point Security Manager with a multi-domain deployment setup.

#### Export from Distributed Check Point Deployment

You must configure the credentials on the Check Point (r80) devices before using Live Connect on the Secure Firewall migration tool to extract the Check Point configuration.

The procedure for pre-staging credentials on a distributed Check Point deployment includes the following steps:

**Step 1** Create the following on the Gaia Console Check Point Security Gateway:

- In the web browser, open the Check Point Gaia Console application through an HTTPS session to connect to the Check Point Security Gateway.
- Navigate to the **User Management** tab and choose **Users > Add**.
- In the **Add User** window, create a new username and password with the following details:
  - From the **Shell** drop-down, choose */etc/cli.sh*.
  - From the **Available Roles**, choose *adminRole*.
  - Retain the default values for the remaining fields.
  - Click **Ok**.
- SSH into your Check Point Security Gateway and create a new password using the command:  
**set expert-password <password>**

- Note**
- If you already have the expert password configured on the Check Point device, reuse that.
  - You will need these credentials on **Connect to Check Point Security Gateway** page as shown in [step 3](#).

Once you have configured the expert password, the pre-staging of credentials for Check Point r80 Gateway is complete. For more information, see [Figure 3: Connect to Check Point Security Gateway](#).

## Step 2

Create the username and password on the Check Point Security Manager for r80:

a) On the SmartConsole application, perform these steps:

1. Log in to Check Point Security Manager.
2. Navigate to **Manage and Settings > Permissions and Administrators > Administrators**.
3. Click \* to create a new username and password, and perform these steps:

- Choose **Authentication Method** as **Check Point Password**.

- Click **Set New Password** to set up a new password.

**Note** Ensure that you do not select the **User Must Change Password on the Next Login** check box.

- Choose **Permission Profile** as **Super User**.

- Choose **Expiration** as **Never**.

4. Click **Publish** to save the configuration changes on the Check Point SmartConsole application.

b) On the Gaia Console for Check Point Security Manager, perform these steps:

**Note** Ensure that the username and password that you now create is the same as that created in the SmartConsole application in [Step 2a](#).

1. In the web browser, open the Gaia Console application through an HTTPS session to connect to the Check Point Security Manager.
2. Navigate to the **User Management** tab, and choose **Users > Add**.
3. Create a username and password that are the same as the username and password created in [Step 2a \(3\)](#) of the SmartConsole application.

- From the **Shell** drop-down, choose */bin/bash*.

- From the **Available Roles** drop-down, choose *adminRole*.

- Retain the default values for the remaining fields.

- Click **Ok**.

4. SSH into the Check Point Security Manager and create an expert password using the command:  
**set expert-password <password>**

**Note** • If you have already configured the expert password, you can use that password.

• The username and password that are created in [Step 2b \(3\)](#) and [Step 2a \(3\)](#) must be the same.

Pre-staging of credentials on Check Point in a distributed deployment for Check Point Security Manager is complete.

You will need these credentials on **Connect to Check Point Security Manager** page as shown in [Step 4](#).

If you are using a custom API port on the Check Point Smart Manager, see [Use a Custom API Port for Check Point \(r80\) Security Manager?](#)

### What to do next

[Procedure to Export the Check Point Configuration Files for r80](#)

## Export from Standalone Check Point Deployment

You must configure the credentials on the Check Point (r80) devices before using Live Connect on the Secure Firewall migration tool to extract the Check Point configuration.

The procedure for pre-staging credentials on standalone Check Point deployment includes the following steps:

**Step 1** In the web browser, open the Gaia Console application through an HTTPS session to connect to the standalone Check Point Device that manages both Check Point Security Gateway and Check Point Security Manager.

**Step 2** Navigate to the **User Management** tab and choose **Users > Add**.

a) In the **Add User** window, create a new username and password with the following details:

- From the **Shell** drop-down, choose */etc/cli.sh*.
- From the **Available Roles** drop-down, choose *adminRole*.
- Retain the default values for the remaining fields.
- Click **Ok**.

You will need these credentials on **Connect to Check Point Security Gateway** page as shown in [step 3](#).

For more information, see [Figure 3: Connect to Check Point Security Gateway](#).

b) In the **Add User** window, create another username and password with the following details:

- From the **Shell** drop-down, choose */bin/bash*.
- From the **Available Roles** drop-down, choose *adminRole*.
- Retain the default values for the remaining fields.
- Click **Ok**.

**Step 3** Create the following on the SmartConsole application for r80 on the Check Point device:

**Note** Ensure that the username and password that you will now create are the same as those created in the Check Point Gaia Console in the preceding step.

- a) Log in to SmartConsole application of the Check Point device.
- b) Navigate to **Manage and Settings > Permissions and Administrators > Administrators**.
- c) Click \* to create a new username and password with the following details:

- Choose the **Authentication Method** as **Check Point Password**.
- Click **Set New Password** to set up a new password.
  - Note** Ensure that you do not select the **User Must Change Password on the Next Login** check box.
- Choose the **Permission Profile** as **Super User**.
- Choose the **Expiration** as **Never**.

The username and password that you created in [Step b](#) of Step 2 and [Step c](#) of Step 3 must be the same.

You will need these credentials on **Connect to Check Point Security Manager** page as shown in [Step 4](#).

- d) Click **Publish** to save the configuration changes on the Check Point SmartConsole application.

**Step 4** SSH into the Check Point device and create an expert password using the command:  
**set expert-password <password>**

- Note**
- If you already have the expert password configured on the Check Point device, reuse that.
  - The username and password that were created in [Step b](#) of Step 2 and [Step c](#) of Step 3 must be the same.

Pre-staging of credentials on Check Point devices in a Standalone deployment is complete.

If you are using a custom API port on the Check Point Smart Manager, see [Use a Custom API Port for Check Point \(r80\) Security Manager?](#).

---

### What to do next

[Procedure to Export the Check Point Configuration Files for r80](#)

## Export from Multi-Domain Check Point Deployment

You must configure the credentials on the Check Point (r80) devices using Live Connect on the Secure Firewall migration tool to extract the Check Point configuration.

The procedure for pre-staging credentials on a multi-domain Check Point deployment includes the following steps:

- Step 1** Create the following on the Gaia Console Check Point Security Gateway:
- In the web browser, open the Gaia Console application through an HTTPS session to connect to the Check Point Security Gateway.
  - Navigate to the **User Management** tab, and choose **Users > Add**.
  - In the **Add User** window, create a new username and password with the following details:
    - From the **Shell** drop-down, choose */etc/cli.sh*.
    - From the **Available Roles** drop-down, choose *adminRole*.
    - Retain the default values for the remaining fields.
    - Click **Ok**.

- d) SSH into your Check Point Security Gateway and create a new password using the command:

```
set expert-password <password>
```

Pre-staging of credentials on the Check Point Security Gateway for a multi-domain deployment is complete.

- e) (Optional) When exporting configuration from a Virtual System Extension (VSX) device, check the **Virtual System ID** checkbox to be able to enter the virtual system ID.

**Figure 1: Connect to Check Point Security Gateway - Multi-Domain Deployment**

1 2 3

### Connect to Checkpoint Security Gateway

IP Address: 10.1.1.1      Port: 22

Admin Username: admin

Admin Password: ●●●●●●●●

Expert Password: ●●●●●●●●

Virtual System ID

Virtual ID Number: 2

Login

**Step 2** Create the username and password on the Check Point Security Manager:

- a) On the SmartConsole (mds) application, perform these steps:

1. Log in to Check Point Security Manager.
2. Navigate to **Manage and Settings > Permissions and Administrators > Administrators**.
3. Click \* to create a new username and password with the following details:
  - Choose the **Authentication Method** as **Check Point Password**.
  - Click **Set New Password** to set up a new password.
 

**Note** Ensure that you do not select the **User Must Change Password on the Next Login** check box.
  - Choose the **Permission Profile** as **Multi-domain Super User**.
  - Choose the **Expiration** as **Never**.
4. Click **Publish** to save the configuration changes on the Check Point SmartConsole application.



If you are using a custom API port on the Check Point Smart Manager, see [Use a Custom API Port for Check Point \(r80\) Security Manager?](#).

b) On the Gaia Console for Check Point Security Manager, perform these steps:

**Note** Ensure that the username and password that you will now create is the same as that created in the SmartConsole application [Step 2a \(3\)](#).

1. In the web browser, open the Gaia Console application through an HTTPS session to connect to the Check Point Security Manager.
2. Navigate to the **User Management** tab, and choose **Users > Add**.
3. Create a username and password that is the same as that created in [Step 2a \(3\)](#) of the SmartConsole application.
  - From the **Shell** drop-down, choose */bin/bash*.
  - From the **Available Roles** drop-down, choose *adminRole*.
  - Retain the default values for the remaining fields.
  - Click **Ok**.
4. SSH into your Check Point Security Manager and create a new password using the command:

```
set expert-password <password>
```

- Note**
- If you already have the expert password configured on the Check Point device, reuse that.
  - The username and password that are created in [Step 2a \(3\)](#) and [Step 2b \(3\)](#) must be the same.

Pre-staging of credentials on Check Point Security Manager in a Multi-Domain deployment is complete.

You will need the credentials to connect to Live Connect as in [Figure 2: Connect to Check Point Security Manager - Multi-Domain Deployment](#).

Figure 2: Connect to Check Point Security Manager - Multi-Domain Deployment

Extracted Networking.txt file successfully

### Connect to Checkpoint Security Manager

IP Address: 10.10.1.2      Port: 22

Smart console username: admin1

Smart console password: \*\*\*\*\*

Expert Password: \*\*\*\*\*

Check Point Multi-Domain Deployment ⓘ

IP Address CheckPoint CMA: 10.1.1.3      API Port: 443

Login

- Note**
- If you are using a custom API port on the Check Point Smart Manager, see [Use a Custom API Port for Check Point \(r80\) Security Manager?](#).
  - Extraction of Global Policy Package for Multi-Domain Deployment is not possible. Hence, the Objects, ACE rules, and NAT rules configured as part of configuration under Check Point CMA are only exported and migrated.

### What to do next

[Procedure to Export the Check Point Configuration Files for r80](#)

## Use a Custom API Port for Check Point (r80) Security Manager?



**Note** If you are using a custom API port on the Check Point Smart Manager, perform these steps:

- Check the **Check Point Multi-Domain Deployment** check box on the **Check Point Security Manager** page of Live Connect.
- Add the IP Address of Check Point CMA and API port details if using the multi-domain deployment.
- Retain the IP Address of the Check Point Security Manager if it is a general deployment and enter the details of the Custom API Port.

## Procedure to Export the Check Point Configuration Files for r80

### Before you begin

It is mandatory to pre-stage the Check Point devices. For detailed information on configuring the credentials on the Check Point (r80) devices before migration, see [Pre-Stage the Check Point \(r80\) Devices for Configuration Extraction Using Live Connect](#).



- Note**
- We recommend that you use Live Connect to extract the Check Point (r80) configurations.
  - Using a Check Point (r80) configuration, that is not exported using Live Connect in the Secure Firewall migration tool, results in the configuration getting migrated as unsupported, getting partially migrated, or resulting in a failed migration.

If the information in the configuration export is incomplete, certain configurations are not migrated and are marked as **unsupported**.

To export the Check Point configuration files for r80, perform the following:

**Step 1** Select Check Point (r80) from the **Select Source Config** page.

**Step 2** Click **Connect**.

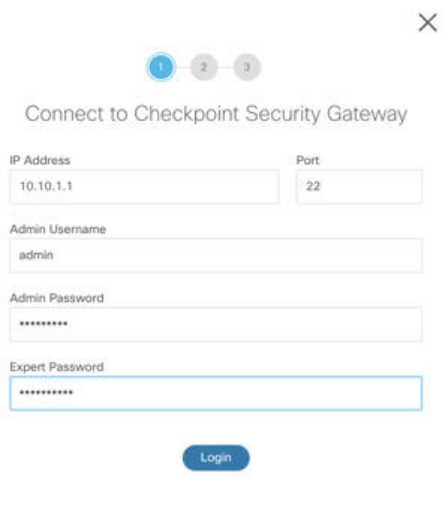
**Note** Live connect is available for Check Point (r80) only.

**Step 3** Connect to Check Point Security Gateway. Perform the following:

a) Enter the following in the Check Point r80 Security Gateway:

- IP Address
- SSH Port
- Admin Username
- Admin Password
- Expert Password

Figure 3: Connect to Check Point Security Gateway



Connect to Checkpoint Security Gateway

IP Address: 10.10.1.1

Port: 22

Admin Username: admin

Admin Password: \*\*\*\*\*

Expert Password: \*\*\*\*\*

Login

b) Click **Login**.

The Secure Firewall migration tool generates the *networking.txt* file that has device-specific configurations such as interface and route configurations. Store the *networking.txt* file in a local directory for the current session of the Secure Firewall migration tool.

**Step 4** Connect to Check Point Security Manager. Perform the following:

a) Enter the following in the Check Point r80 Security Manager:

- IP Address
- SSH Port
- Smart Console Username
- Smart Console Password
- Expert Password

Figure 4: Connect to Check Point Security Manager

b) Click **Login**.

The Secure Firewall migration tool generates the *Extracted-objects.json* file that captures the complete network and service object configuration available in the Check Point Security Manager.

Store the *Extracted-objects.json* in a local directory for the current session of the Secure Firewall migration tool.

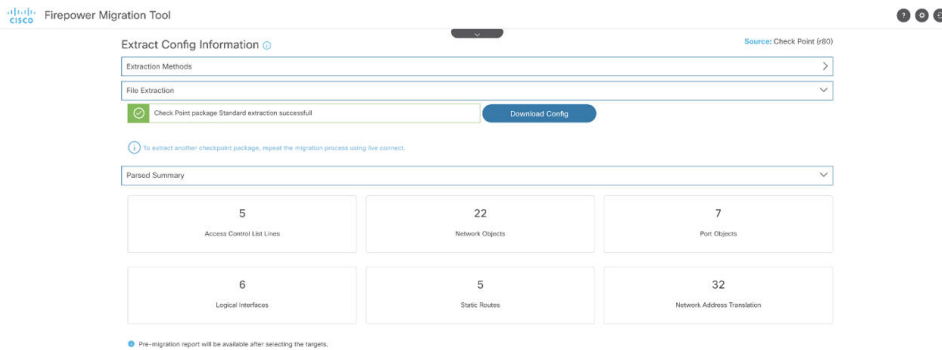
**Note** If you have connected the Secure Firewall migration tool to the Check Point Security Manager, the list of policy packages available in the Check Point Security Manager is displayed.

**Step 5** Select the Check Point Policy Package that you want to migrate from the **Select Check Point Package** list, and click **Start Extraction**.

Figure 5: Extracting the Check Point Policy Package

**Step 6** Download the configuration and proceed with the migration.

**Figure 6: Extraction of the Check Point Configuration Complete for Distributed and Standalone Deployment**



**Step 7** Click **Next** to proceed with Migration of Check Point (r80) configuration.

### What to do next

[Upload the Check Point Configuration File](#)

## Extract Another Configuration File

To extract another configuration file, perform the following steps:

- Click **Back to source selection** to extract a new configuration for a different policy package or to connect to a different Check Point (r80) firewall.
- Download the current configuration if you must migrate the extracted Check Point (r80) configuration later.



**Note** The current configuration file is downloaded to a default download location set by the browser.

You can use Assembly Line Approach to extract r80 configuration:

- Perform Live Connect to extract the Check Point (r80) configuration file for each package of firewall or for different firewalls.
- Create a repository for multiple configurations.
- Use the **Start Migration later** option using manual upload to proceed with the migration later.

## Upload the Check Point Configuration File

### Before you begin

Export the configuration file as .zip format.

- 
- Step 1** On the **Extract Config Information** screen, in the **Manual Upload** section, click **Upload** to upload the Check Point configuration file.
- Step 2** Browse to the location where the configuration file is stored. The configuration file is extracted for Check Point (r77) and downloaded using Live Connect for Check Point (r80). Click **Open**.
- The Secure Firewall migration tool uploads the configuration file. For large configuration files, this step takes longer time.
- The pre-parsing process is now complete.
- The Parsed Summary section displays the parsing status.
- Step 3** Review the summary of the elements that the Secure Firewall migration tool detected and parsed in the uploaded configuration file.
- Step 4** Click **Next** to select the target parameters.
- 

### What to do next

[Specify Destination Parameters for the Secure Firewall Migration Tool](#)

## Specify Destination Parameters for the Secure Firewall Migration Tool

### Before you begin

If you are using the cloud version of the migration tool hosted on CDO, skip to [Step 3](#).

- Obtain the IP address for the management center for On-Prem Firewall Management Center.
- From Secure Firewall Migration Tool 3.0 onwards, you can select between On-Prem Firewall Management Center or Cloud-delivered Firewall Management Center.
- For Cloud-delivered Firewall Management Center, region and API token have to be provided. For more information, see [Supported Target Management Center for Migration](#).
- (Optional) If you want to migrate device-specific configurations like interfaces and routes, add the target threat defense to the management center. See [Adding Devices to the Firewall Management Center](#)
- If it requires you to apply IPS or file policy to ACL in the **Review and Validate** page, we highly recommend you create a policy on the management center before migration. Use the same policy, as the Secure Firewall migration tool fetches the policy from the connected management center. Creating a new policy and assigning it to multiple access control lists may degrade the performance and may also result in a push failure.

- 
- Step 1** On the **Select Target** screen, in the **Firewall Management** section, do the following: you can choose to migrate to an On-Prem Firewall Management Center or Cloud-delivered Firewall Management Center:
- For migrating to an On-Prem Firewall Management Center, do the following:
    - a) Click the **On-Prem FMC** radio button.
    - b) Enter the IP address or Fully-Qualified Domain Name (FQDN) for the management center.

- c) In the **Domain** drop-down list, select the domain to which you are migrating.  
If you want to migrate to a threat defense device, you can only migrate to the threat defense devices available in the selected domain.
- d) Click **Connect** and proceed to **Step 2**.
  - For migrating to a Cloud-delivered Firewall Management Center, do the following:
    - a) Click the **Cloud-delivered FMC** radio button.
    - b) Choose the region and paste the CDO API token. For generating the API token, from CDO, follow the below steps:
      1. Log in to CDO portal.
      2. Navigate to **Settings > General Settings** and copy the API Token.
- c) Click **Connect** and proceed to **Step 2**.

**Step 2**

In the **Firewall Management Center Login** dialog box, enter the username and password of the dedicated account for the Secure Firewall migration tool, and click **Login**.

The Secure Firewall migration tool logs in to the management center and retrieves a list of threat defense devices that are managed by that management center. You can view the progress of this step in the console.

**Step 3**

Click **Proceed**.

**Step 4**

In the **Choose Threat Defense** section, do one of the following:

- Click the **Select Firewall Threat Defense Device** drop-down list and check the device where you want to migrate the Check Point configuration.

The devices in the selected management center domain are listed by **IP Address** and **Name**.

**Note** At minimum, the native threat defense device you choose must have the same number of physical or port channel interfaces as the Check Point configuration that you are migrating. At minimum, the container instance of the threat defense device must have the same number of physical or port channel interfaces and subinterfaces. You must configure the device with the same firewall mode as the Check Point configuration. However, these interfaces do not have to have the same names on both devices.

**Note** Only when the supported target threat defense platform is Firewall 1010 with management center version 6.5 or later, FDM 5505 migration support is applicable for shared policies and not for device specific policies. When you proceed without threat defense, the Secure Firewall migration tool will not push any configurations or the policies to the threat defense. Thus, interfaces and routes, and site-to-site VPN which are threat defense device-specific configurations will not be migrated. However, all the other supported configurations (shared policies and objects) such as NAT, ACLs, and port objects will be migrated. Remote Access VPN is a shared policy and can be migrated even without threat defense.

Check Point firewall migration to management center or threat defense 6.7 or later with the Remote deployment enabled is supported by the Secure Firewall migration tool. Migration of Interface and Routes must be done manually.

- Click **Proceed without FTD** to migrate the configuration to the management center.

When you proceed without threat defense, the Secure Firewall migration tool will not push any configurations or the policies to threat defense. Thus, interfaces and routes, and site-to-site VPN which are threat defense device-specific configurations will not be migrated and need to be manually configured on management center.



However, all the other supported configurations (shared policies and objects) such as NAT, ACLs, and port objects will be migrated. Remote Access VPN is a shared policy and can be migrated even without threat defense.

**Step 5** Click **Proceed**.

Depending on the destination that you are migrating to, the Secure Firewall migration tool allows you to select the features that you want to migrate.

**Step 6** Click the **Select Features** section to review and select the features that you want to migrate to the destination.

- If you are migrating to a destination threat defense device, the Secure Firewall migration tool automatically selects the features available for migration from the Check Point configuration in the **Device Configuration** and **Shared Configuration** sections. You can further modify the default selection, according to your requirements.
- If you are migrating to a management center, the Secure Firewall migration tool automatically selects the features available for migration from the Check Point configuration in the **Device Configuration**, **Shared Configuration**, and **Optimization** sections. You can further modify the default selection, according to your requirements.
- For Check Point, under **Shared Configuration**, select the relevant **Access Control** option:

- **Global Policy**—When you select this option, the source, and destinations zone for the ACL policy are migrated as **Any**.
- **Zone-Based Policy**—When you select this option, source, and destination zones are derived based on the predicative route-lookup through routing mechanism for the source and destination network objects or groups.

**Note** Route-lookup is limited to Static routes and Dynamic routes (PBR and NAT are not considered) and depending on the nature of the source and destination Network Object-Groups, this operation may result in rule explosion.

The routing information is obtained from the `networking.txt` file. This file is the output of the FMT-CP-Config-Extractor\_v4.0.1-8248 Tool that uses `netstat -rnv` command to gather the routing table. For more information, see [Export Device Configuration Using Configuration Extractor](#).

IPv6 Route-lookup for Zone-Based policies is not supported in this release. Ensure that all the rules of the Global Policy or of the Zone-Based Policy are migrated successfully.

Under **Device Configuration**, choose interfaces, routes, and site-to-site VPN tunnel configurations to be migrated from your Check Point firewall. Note that you can migrate only a policy-based (cryptomap) site-to-site VPN tunnel configuration.

- (Optional) In the **Optimization** section, select **Migrate only referenced objects** to migrate only those objects that are referenced in an access control policy and a NAT policy.

**Note** When you select this option, unreferenced objects in the Check Point configuration will not be migrated. This optimizes migration time and cleans out unused objects from the configuration.

**Step 7** Click **Proceed**.

**Step 8** In the **Rule Conversion/ Process Config** section, click **Start Conversion** to initiate the conversion.

**Step 9** Review the summary of the elements that the Secure Firewall migration tool converted.

To check whether your configuration file is successfully uploaded and parsed, download and verify the **Pre-Migration Report** before you continue with the migration.

**Step 10** Click **Download Report** and save the **Pre-Migration Report**.

A copy of the **Pre-Migration Report** is also saved in the `Resources` folder in the same location as the Secure Firewall migration tool.

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#### What to do next

[Review the Pre-Migration Report, on page 46](#)

## Review the Pre-Migration Report

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**Step 1** Navigate to where you downloaded the **Pre-Migration Report**.

Copy of the **Pre-Migration Report** is also saved in the `Resources` folder in the same location as the Secure Firewall migration tool.

**Step 2** Open the **Pre-Migration Report** and carefully review its contents to identify any issues that can cause the migration to fail.

The **Pre-Migration Report** includes the following information:

- **Migration Summary**—Overall summary of the supported Check Point configuration elements that can be successfully migrated to Firepower Threat Defense. For example, Policy Names, Rule Counts etc.
- **Parse Error Details**—Highlight the configuration that has resulted in parsing failure. Doing so helps to edit and update the configuration for retry.
- **Unsupported Configuration**—List of all the configuration items which are not supported for migration by FMT contained in a more detailed way. For example, Loopback, Alias Interfaces, Domain Objects.
- **Partially Supported Configuration**—List of all the Check Point configuration elements that can be only partially migrated. For example, Static routes with Ping Parameter.
- **Skipped Configuration**—List of all the Check Point configuration elements that are ignored by FMT during migration and will not be carried forward to the target system.

For more information about supported features in the management center and threat defense, see [Firepower Management Center Configuration Guide](#).

**Step 3** If the **Pre-Migration Report** recommends corrective actions, complete those corrections on the Check Point, export the Check Point configuration file again, and upload the updated configuration file before proceeding.

**Step 4** After your Check Point configuration file is successfully uploaded and parsed, return to the Secure Firewall migration tool and click **Next** to continue the migration.

---

## Map Check Point Firewall Configurations with Threat Defense Interfaces

The threat defense device must have an equal or greater number of physical and port channel interfaces than those used by Check Point configuration. These interfaces do not have to have the same names on both devices. You can choose how you want to map the interfaces.

On the **Map FTD Interface** screen, the Secure Firewall migration tool retrieves a list of the interfaces on the threat defense device. By default, the Secure Firewall migration tool maps the interfaces in Check Point and the threat defense device according to their interface identities. For example, the 'management-only' interface on the Check Point interface is automatically mapped to the 'management-only' interface on the threat defense device and is unchangeable.

The mapping of Check Point interface to the threat defense interface differs based on the threat defense device type:

- If the target threat defense is of native type:
  - The threat defense must have equal or a greater number of used Check Point interfaces or port channel (PC) data interfaces (excluding management-only and subinterfaces in the Check Point configuration). If the number is less, add the required type of interface on the target threat defense.
  - Subinterfaces are created by the secure Firewall migration tool based on physical interface or port channel mapping.
- If the target threat defense is of container type:
  - The threat defense must have equal or a greater number of used Check Point interfaces, physical subinterfaces, port channel, or port channel subinterfaces (excluding management-only in Check Point configuration). If the number is less, add the required type of interface on the target threat defense. For example, if the number of physical interfaces and physical subinterface on the target threat defense is 100 less than that of Check Point then you can create the additional physical or physical subinterfaces on the target threat defense.
  - Subinterfaces are not created by the Secure Firewall migration tool. Only interface mapping is allowed between physical interfaces, port channel, or subinterfaces.

### Before you begin

Make sure you have connected to the management center and chosen the destination as threat defense. For more information, see [Specify Destination Parameters for the Secure Firewall Migration Tool, on page 43](#).



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**Note** This step is not applicable if you are migrating to a management center without a threat defense device.

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**Step 1** If you want to change an interface mapping, click the drop-down list in the **FTD Interface Name** and choose the interface that you want to map to that Check Point interface.

You cannot change the mapping of the management interfaces. If a threat defense interface has already been assigned to an Check Point interface, you cannot choose that interface from the drop-down list. All assigned interfaces are greyed out and unavailable.

You do not need to map subinterfaces. The Secure Firewall migration tool maps subinterfaces on the threat defense device for all subinterfaces in the Check Point configuration.

**Step 2** When you have mapped each Check Point interface to a threat defense interface, click **Next**.

---

**What to do next**

Map the Check Point interfaces to the appropriate threat defense interface objects, security zones, and interface groups. For more information, see [Map Check Point Interfaces to Security Zones and Interface Groups](#).

**Map Check Point Interfaces to Security Zones and Interface Groups**

To ensure that the Check Point configuration is migrated correctly, map the Check Point interfaces to the appropriate threat defense interface objects, security zones and interface groups. In an Check Point configuration, access control policies and NAT policies use interface names (nameif). In management center, those policies use interface objects. In addition, management center policies group interface objects into the following:

- Security zones—An interface can belong to only one security zone.
- Interface groups—An interface can belong to multiple interface groups.

The Secure Firewall migration tool allows one-to-one mapping of interfaces with security zones and interface groups; when a security zone or interface group is mapped to an interface, it is not available for mapping to other interfaces although the management center allows it. For more information about security zones and interface groups in management center, see [Security Zones and Interface Groups](#) in *Cisco Secure Firewall Management Center Device Configuration Guide*.

- 
- Step 1** On the **Map Security Zones and Interface Groups** screen, review the available interfaces, security zones, and interface groups.
- Step 2** To map interfaces to security zones and interface groups that exist in management center, or that is available in configuration files as Security Zone type objects and is available in the drop-down list, do the following:
- a) In the **Security Zones** column, choose the security zone for the interface.
  - b) In the **Interface Groups** column, choose the interface group for the interface.
- Step 3** To map interfaces to security zones and interface groups that exist in management center, or that is available in Check Point (r80) configuration files as Security Zone type objects and is available in the drop-down list, do the following:
- a) In the **Security Zones** column, choose the security zone for that interface.
  - b) In the **Interface Groups** column, choose the interface group for that interface.
- Step 4** You can manually map or auto-create the security zones and interface groups.
- Step 5** To map the security zones and interface groups manually, perform the following:
- a) Click **Add SZ & IG**.
  - b) In the **Add SZ & IG** dialog box, click **Add** to add a new security zone or Interface Group.
  - c) Enter the security zone name in the **Security Zone** column. The maximum characters allowed is 48. Similarly, you can add an interface group.
  - d) Click **Close**.
- To map the security zones and interface groups through auto-creation, perform the following:
- a) Click **Auto-Create**.
  - b) In the **Auto-Create** dialog box, check one or both of **Interface Groups** and **Zone Mapping**.
  - c) Click **Auto-Create**.

The Secure Firewall migration tool gives these security zones the same name as the Check Point interface, such as **outside** or **inside**, and displays an "(A)" after the name to indicate that it was created by the Secure Firewall migration tool. The interface groups have an `_ig` suffix added, such as **outside\_ig** or **inside\_ig**. In addition, the security zones and interface

groups have the same mode as the Check Point interface. For example, if the Check Point logical interface is in L3 mode, the security zone and interface group that is created for the interface is also in L3 mode.

**Step 6** When you have mapped all interfaces to the appropriate security zones and interface groups, click **Next**.

---

## Optimize, Review and Validate the Configuration

Before you push the migrated Check Point configuration to management center, optimize and review the configuration carefully and validate that it is correct and matches how you want to configure the threat defense device. A flashing tab indicates that you must take the next course of action.



**Note** If you close the Secure Firewall migration tool at the **Optimize, Review and Validate Configuration** screen, it saves your progress and allows you to resume the migration later. If you close the Secure Firewall migration tool before this screen, your progress is not saved. If there is a failure after parsing, relaunching the Secure Firewall migration tool resumes from the **Interface Mapping** screen.

---

Here, the Secure Firewall migration tool fetches the Intrusion Prevention System (IPS) policies and file policies, which are already present on the management center and allows you to associate those to the access control rules you are migrating.

A file policy is a set of configurations that the system uses to perform Advanced Malware Protection for networks and file control, as part of your overall access control configuration. This association ensures that before the system passes a file in traffic that matches the conditions of the access control rule, it first inspects the file.

Similarly, you can use an IPS policy as the system's last line of defense before traffic is allowed to proceed to its destination. Intrusion policies govern how the system inspects traffic for security violations and, in inline deployments, can block or alter malicious traffic. Whenever the system uses an intrusion policy to evaluate traffic, it uses an associated variable set. Most variables in a set represent values commonly used in intrusion rules to identify source and destination IP addresses and ports. You can also use variables in intrusion policies to represent IP addresses in rule suppression and dynamic rule states.

To search for specific configuration items on a tab, enter the item name in the field at the top of the column. The table rows are filtered to display only items that match the search term.



**Note** By default, the Inline Grouping option is enabled.

---

If you close the Secure Firewall migration tool at the **Optimize, Review and Validate Configuration** screen, it saves your progress and allows you to resume the migration later. If you close the before this screen, your progress is not saved. If there is a failure after parsing, relaunching the Secure Firewall migration tool resumes from the **Interface Mapping** screen.

### Secure Firewall Migration Tool ACL Optimization Overview

The Secure Firewall migration tool provides support to identify and segregate ACLs that can be optimized (disabled or deleted) from the firewall rule base without impacting the network functionality.

The ACL optimization supports the following ACL types:

- **Redundant ACL**—When two ACLs have the same set of configurations and rules, then removing the non-base ACL will not impact the network. For example, if any two rule allows FTP and IP traffic on the same network with no rules that are defined for denying access, the first rule can be deleted.
- **Shadow ACL**—The first ACL completely shadows the configurations of the second ACL. If two rules have similar traffic, the second rule is not applied to any traffic as it appears later in the access list. If the two rules specify different actions for traffic, you can either move the shadowed rule or edit any one of the rules to implement the required policy. For example, the base rule may deny the IP traffic, and the shadowed rule may allow FTP traffic for a given source or destination.

The Secure Firewall migration tool uses the following parameters while comparing rules for ACL optimization:




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**Note** Optimization is available for the Check Point only for ACP rule action.

---

- The disabled ACLs are not considered during the optimization process.
- The source ACLs are expanded into the corresponding ACEs (inline values), and then compared for the following parameters:
  - Source and Destination Zones
  - Source and Destination Network
  - Source and Destination Port

Click **Download Report** to review the ACL name and the corresponding redundant and shadowed ACLs tabulated in an Excel file. Use the **Detailed ACL Information** sheet to view more ACL information.

### Object Optimization

The following objects are considered for object optimization during the migration process:

- **Unreferenced objects**—You can choose not to migrate unreferenced objects at the beginning of the migration.
- **Duplicate objects**—If an object already exists on management center, instead of creating a duplicate object, the policy is reused.
- **Inconsistent objects**—If there are objects with similar names but different content, the object names are modified by the Secure Firewall migration tool before the migration push.

---

**Step 1** (Optional) On the **Optimize, Review and Validate Configuration** screen, click **Optimize ACL** in **Access Control > ACP** to run the optimization code, and perform the following:

- To download the identified ACL optimization rules, click **Download Report**.
- Select rules and choose **Actions > Migrate as disabled** or **Do not migrate** and apply one of the actions.
- Click **Save**.

The migration operation changes from **Do not migrate** to **disabled** or vice-versa.

You can perform bulk selection of rules, using the following options

- **Migrate**—To migrate with default state.
- **Do not Migrate**—To ignore the migration of ACLs.

- Migrate as disabled—To migrate ACLs with *State* field set to *Disable*.
- Migrate as enabled—To migrate ACLs will with *State* field set to *Enable*.

**Step 2** On the **Optimize, Review and Validate Configuration** screen, click **Access Control Rules** and do the following:

- a) For each entry in the table, review the mappings and verify that they are correct.

A migrated Access Policy Rule uses the ACL name as prefix and appends the ACL rule number to it to make it easier to map back to the Check Point configuration file. For example, if a Check Point ACL is named "inside\_access", then the first rule (or ACE) line in the ACL will be named as "inside\_access\_#1". If a rule must be expanded because of TCP or UDP combinations, an extended service object, or some other reason, the Secure Firewall migration tool adds a numbered suffix to the name. For example, if the allow rule is expanded into two rules for migration, they are named "inside\_access\_#1-1" and "inside\_access\_#1-2".

For any rule that includes an unsupported object, the Secure Firewall migration tool appends an "\_UNSUPPORTED" suffix to the name.

- b) If you do not want to migrate one or more access control list policies, choose the rows by checking the box against the policy, choose **Actions > Do not migrate** and then click **Save**.

All rules that you choose not to migrate are grayed out in the table.

- c) If you want to apply a management center file policy to one or more access control policies, check the box for the appropriate rows, choose **Actions > File Policy**.

In the **File Policy** dialog, select the appropriate file policy and apply it to the selected access control policies and click **Save**.

- d) If you want to apply a management center IPS policy to one or more access control policies, check the box for the appropriate rows, choose **Actions > IPS Policy**.

In the **IPS Policy** dialog, select the appropriate IPS policy and its corresponding variable set and apply it to the selected access control policies and click **Save**.

- e) If you want to change the logging options for an access control rule which has logging enabled, check the box for the appropriate row and choose **Actions > Log**.

In the **Log** dialog, you can enable logging events either at the beginning or end of a connection or both. If you enable logging, you must opt to send the connection events either to the **Event Viewer** or to the **Syslog** or both. When you opt to send connection events to a syslog server, you can choose the syslog policies that are already configured on the management center from the **Syslog** drop-down menu.

- f) If you want to change the actions for the migrated access control rules in the Access Control table, check the box for the appropriate row and choose **Actions > Rule Action**.

**Tip** The IPS and file policies that are attached to an access control rule are automatically removed for all rule actions except for the **Allow** option.

You can filter the ACE counts in the ascending, descending, equal, greater than, and lesser than filtering order sequence.

To clear the existing filter criteria, and to load a new search, click **Clear Filter**.

**Note** The order that you sort the ACL based on ACE is for viewing only. The ACLs are pushed based on the chronological order in which they occur.

**Step 3** Click the following tabs and review the configuration items:

- **Access Control**
- **Objects (Network Objects, Port Objects, VPN Objects)**
- **NAT**
- **Interfaces**
- **Routes**
- **Site-to-Site VPN Tunnels**

If you do not want to migrate one or more NAT rules or route interfaces, check the box for the appropriate rows, choose **Actions > Do not migrate**, and then click **Save**.

All rules that you choose not to migrate are grayed out in the table.

- Step 4** You can view routes from the **Routes** area and select the routes that you do not want to migrate, by selecting an entry and choosing **Actions > Do not migrate**.
- Step 5** In the **Site-to-Site VPN Tunnels** section, the VPN tunnels from the source firewall configurations are listed. Review the VPN tunnel data such as **Source Interface**, **VPN Type**, and **IKEv1** and **IKEv2** configurations for each row and ensure that you provide the preshared key values for all the rows.
- Step 6** (Optional) To download the details for each configuration item in the grid, click **Download**.
- Step 7** After you have completed your review, click **Validate**. Note that the mandatory fields that need your attention keeps flickering until you enter values in them. The **Validate** button gets enabled only after all the mandatory fields are filled.
- During validation, the Secure Firewall migration tool connects to management center, reviews the existing objects, and compares those objects to the list of objects to be migrated. If an object already exists in management center, the Secure Firewall migration tool does the following:
- If the object has the same name and configuration, the Secure Firewall migration tool reuses the existing object and does not create a new object in management center.
  - If the object has the same name but a different configuration, the Secure Firewall migration tool reports an object conflict.
- You can view the validation progress in the console.
- Step 8** When the validation is complete, if the **Validation Status** dialog box shows one or more object conflicts, do the following:
- a) Click **Resolve Conflicts**.  
The Secure Firewall migration tool displays a warning icon on either or both of the **Network Objects** or **Port Objects** tab, depending upon where the object conflicts were reported.
  - b) Click the tab and review the objects.
  - c) Check the entry for each object that has a conflict and choose **Actions > Resolve Conflicts**.
  - d) In the **Resolve Conflicts** window, complete the recommended action.  
For example, you might be prompted to add a suffix to the object name to avoid a conflict with the existing management center object. You can accept the default suffix or replace it with one of your own.
  - e) Click **Resolve**.
  - f) When you have resolved all object conflicts on a tab, click **Save**.
  - g) Click **Validate** to revalidate the configuration and confirm that you have resolved all object conflicts.



- Step 9** When the validation is complete and the **Validation Status** dialog box displays the message **Successfully Validated**, continue with [Push the Migrated Configuration to Management Center, on page 53](#).
- 

## Push the Migrated Configuration to Management Center

You cannot push the migrated Check Point configuration to management center if you have not successfully validated the configuration and resolved all object conflicts.

This step in the migration process sends the migrated configuration to management center. It does not deploy the configuration to the threat defense device. However, any existing configuration on the threat defense is erased during this step.



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**Note** Do not make any configuration changes or deploy to any device while the Secure Firewall migration tool is sending the migrated configuration to management center.

---

- Step 1** In the **Validation Status** dialog box, review the validation summary.
- Step 2** Click **Push Configuration** to send the migrated Check Point configuration to management center.
- The Secure Firewall migration tool displays a summary of the progress of the migration. You can view detailed, line-by-line progress of which the components that are being pushed to management center in the console.
- Step 3** After the migration is complete, click **Download Report** to download and save the post-migration report.
- Copy of the **Post-Migration Report** is also saved in the `Resources` folder in the same location as the Secure Firewall migration tool.
- Step 4** If your migration failed, review the post-migration report, log file, and unparsed file carefully to understand what caused the failure.
- You can also contact the support team for troubleshooting.
- ### Migration Failure Support
- If the migration is unsuccessful, contact Support.
- On the **Complete Migration** screen, click the **Support** button.  
The Help support page appears.
  - Check the **Support Bundle** check box and then select the configuration files to download.  
**Note** The Log and dB files are selected for download by default.
  - Click **Download**.  
The support bundle file is downloaded as a .zip to your local path. Extract the Zip folder to view the log files, DB, and the Configuration files.
  - Click **Email us** to email the failure details for the technical team.  
You can also attach the downloaded support files to your email.
  - Click **Visit TAC page** to create a TAC case in the Cisco support page.

**Note** You can open a TAC case at any time during the migration from the support page.

---

## Review the Post-Migration Report for Check Point and Complete the Migration

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- Step 1** Navigate to where you downloaded the post-migration report.
- Step 2** Open the post-migration report and carefully review its contents to understand how your ASA configuration was migrated:
- **Migration Summary**—A summary of the configuration that was successfully migrated from Check Point to Firepower Threat Defense.
  - **Selective Policy Migration**—Details of the specific Check Point features selected for migration and Interface Mapping are available.
  - **Migration Conversions**—Conversion and push details which includes the following:
    - Network/Service object handling
    - List of partially migrated configurations with reasons
    - List of Unsupported configurations with reason
    - Expanded Access Control Rules
- 

## Uninstall the Secure Firewall Migration Tool

All components are stored in the same folder as the Secure Firewall migration tool.

---

- Step 1** Navigate to the folder where you placed the Secure Firewall migration tool.
- Step 2** If you want to save the logs, cut or copy and paste the `log` folder to a different location.
- Step 3** If you want to save the pre-migration reports and the post-migration reports, cut or copy and paste the `resources` folder to a different location.
- Step 4** Delete the folder where you placed the Secure Firewall migration tool.
- Tip** The log file is associated with the console window. If the console window for the Secure Firewall migration tool is open, the log file and the folder cannot be deleted.
-

# Sample Migration: Check Point to Threat Defense 2100



**Note** Create a test plan that you can run on the target device after you complete the migration.

- [Pre-Maintenance Window Tasks](#)
- [Maintenance Window Tasks](#)

## Pre-Maintenance Window Tasks

### Before you begin

Make sure you have installed and deployed a management center. For more information, see the appropriate [Management Center Hardware Installation Guide](#) and the appropriate [Management Center Getting Started Guide](#).

- 
- Step 1** Use the Check Point Web Visualization Tool and FMT-CP-Config-Extractor\_v4.0.1-8248 Tool to collect the Check Point device configurations that you are trying to migrate and save a copy of the Check Point configuration files.
- Step 2** Review the Check Point configuration zip file.
- Step 3** Deploy the Firepower 2100 series device in your network, connect the interfaces and power on the appliance.  
For more information, see [Cisco Threat Defense for the 2100 Series Using Management Center Quick Start Guide](#).
- Step 4** Register the Firepower 2100 series device to be managed by the management center.  
For more information, see [Add Devices to the Management Center](#).
- Step 5** (Optional) If your source Check Point configuration has bond interfaces, create port channels (EtherChannels) on the target Firepower 2100 series device.  
For more information, see [Configure EtherChannels and Redundant Interfaces](#).
- Step 6** Download and run the most recent version of the Secure Firewall migration tool from <https://software.cisco.com/download/home/286306503/type>.  
For more information, see [Download the Secure Firewall Migration Tool from Cisco.com, on page 25](#).
- Step 7** When you launch the Secure Firewall migration tool, and specify destination parameters, make sure that you select the Firepower 2100 series device that you registered to the management center.  
For more information, see [Specify Destination Parameters for the Secure Firewall Migration Tool, on page 43](#).
- Step 8** Map the Check Point interfaces with the threat defense interfaces.
- Note** The Secure Firewall migration tool allows you to map an Check Point interface type to the threat defense interface type.  
For example, you can map a bond interface in Check Point to a physical interface in threat defense.  
For more information, see [Map Check Point Firewall Configurations with Threat Defense Interfaces](#).

- Step 9** While mapping logical interfaces to security zones, click **Auto-Create** to allow the Secure Firewall migration tool to create new security zones. To use existing security zones, manually map the Check Point logical interfaces to the security zones.
- For more information, see [Map Check Point Interfaces to Security Zones and Interface Groups](#).
- Step 10** Follow the instructions of this guide to sequentially review and validate the configuration to be migrated, and then push the configuration to the management center.
- Step 11** Review the Post Migration report, manually setup and deploy other configurations to the threat defense and complete the migration.
- For more information, see [Review the Post-Migration Report for Check Point and Complete the Migration, on page 54](#).
- Step 12** Test the Firepower 2100 series device using the test plan that you would have created while planning for migration.
- 

## Maintenance Window Tasks

### Before you begin

Make sure you have completed all the tasks that must be performed before the maintenance window. See [Pre-Maintenance Window Tasks, on page 55](#).

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- Step 1** Connect to the Check Point Security Gateway through the Gaia Console.
- Step 2** Shutdown the Check Point interfaces of intended Security Gateway through the Gaia console.
- Step 3** (Optional) Access the management center and configure dynamic routing, platform settings, and other features that are not migrated by the Secure Firewall migration tool that are needed manually for the Firepower 2100 series device.
- Step 4** Clear the Address Resolution Protocol (ARP) cache on the surrounding switching infrastructure.
- Step 5** Perform basic ping tests from surrounding switching infrastructure to the Firepower 2100 series device interface IP addresses, to make sure that they are accessible.
- Step 6** Perform basic ping tests from devices which require layer 3 routing to Firepower 2100 series device interface IP addresses.
- Step 7** If you are assigning a new IP address to the Firepower 2100 series device and not reusing the IP address assigned to the Check Point perform the following steps:
- a. Update any static routes which refer to the IP address, so that they now point to the Firepower 2100 series device IP address.
  - b. If you are using routing protocols, ensure that neighbors see the Firepower 2100 series device IP address as the next hop for expected destinations.
- Step 8** Run a comprehensive test plan and monitor logs within the managing management center for your Firepower 2100 device.
-



## CHAPTER 3

# Cisco Success Network-Telemetry Data

- [Cisco Success Network - Telemetry Data, on page 57](#)

## Cisco Success Network - Telemetry Data

Cisco Success Network is an always-on usage information and metrics collection feature in the Secure Firewall migration tool, which collects and transmits usage statistics through a secure cloud connection between the migration tool and the Cisco cloud. These statistics help us provide additional support on unused features and also improve our products. When you initiate a migration process in the Secure Firewall migration tool, the corresponding telemetry data file is generated and stored in a fixed location.

When you push the migrated Check Point configuration to management center, the push service reads the telemetry data file from the location and deletes it after the data is successfully uploaded to the cloud.

The migration tool provides two options to choose from, for streaming telemetry data—**Limited** and **Extensive**.

With **Cisco Success Network** set to **Limited**, the following telemetry data points are collected:

**Table 2: Limited Telemetry**

Data Point	Description	Example Value
Time	The time and date when the telemetry data is collected	2023-04-25 10:39:19
Source Type	The source device type	ASA
Device Model Number	Model number of ASA	ASA5585-SSP-10, 5969 MB RAM, CPU Xeon 5500 series 2000 MHz, 1 CPU (4 cores)
Source Version	Version of ASA	9.2 (1)
Target Management Version	The target version of management center	6.5 or later
Target Management Type	The type of target management device, namely, management center	Management Center
Target Device Version	The version of target device	75

Data Point	Description	Example Value
Target Device Model	The model of target device	Cisco Secure Firewall Threat Defense for VMware
Migration Tool Version	The version of the migration tool	1.1.0.1912
Migration Status	The status of the migration of ASA configuration to management center	SUCCESS

The following tables provide information on the telemetry data points, their descriptions, and sample values, when **Cisco Success Network** is set to **Extensive**:

**Table 3: Extensive Telemetry**

Data Point	Description	Example Value
Operating System	Operating system that runs the Secure Firewall migration tool. It could be Windows7/Windows10 64-bit/macOS High Sierra	Windows 7
Browser	Browser used to launch the Secure Firewall migration tool. It could be Mozilla/5.0 or Chrome/68.0.3440.106 or Safari/537.36	Mozilla/5.0

**Table 4: Source Check Point Information**

Data Point	Description	Example Value
Time	The time and date when the telemetry data is collected	2023-04-25 10:39:19
Source Type	The source device type	Check Point
Source Device Serial Number	Serial number of Check Point	Serial number of device if exists.
Source Device Model Number	Model number of Check Point	
Source Device Version	Version of Check Point	R77.30
Source Config Counts	The total number of lines in the source configuration	504
Firewall Mode	The firewall mode configured on Check Point - routed or transparent	ROUTED
Context Mode	The context mode of Check Point. This can be single or multi-context.	SINGLE
<b>Check Point Config Statistics:</b>		
ACL Counts	The number of ACLs which are attached to access group	46
Access Rules Counts	The total number of access rules	46

Data Point	Description	Example Value
NAT Rule Counts	The total number of NAT rules	17
Network Object Counts	The number of network objects configured in Check Point	34
Network Object Group Counts	The number of network object groups in Check Point	6
Port Object Counts	The number of port objects	85
Port Object Group Counts	The number of port object groups	37
Unsupported Access Rules Count	The total number of unsupported access rules	3
Unsupported NAT Rule Count	The total number of unsupported NAT access rules	0
FQDN Based Access Rule Counts	The number of FQDN -based access rules	7
Time range Based Access Rule Counts	The number of time range based access rules	1
SGT Based Access Rule Counts	The number of SGT-based access rules	0
<b>Summary of Config lines that Tool is not able to parse</b>		
Unparsed Config Count	The number of config lines that are unrecognized by the parser	68
Total Unparsed Access Rule Counts	The total number of unparsed access rules	3

**Table 5: Target Management Device (Management Center) Information**

Data Point	Description	Example Value
Target Management Version	The target version of management center	6.2.3.3 (build 76)
Target Management Type	The type of target management device, namely, management center	Management Center
Target Device Version	The version of target device	75
Target Device Model	The model of target device	Cisco Secure Firewall Threat Defense for VMware
Migration Tool Version	The version of the migration tool	1.1.0.1912

**Table 6: Migration Summary**

Data Point	Description	Example Value
<b>Access Control Policy</b>		

Data Point	Description	Example Value
Name	The name of access control policy	Doesn't Exist
Access Rule Counts	The total number of migrated ACL rules	0
Partially Migrated ACL Rule Counts	The total number of partially migrated ACL rules	3
Expanded ACP Rule Counts	The number of expanded ACP rules	0
<b>NAT Policy</b>		
Name	The name of NAT policy	Doesn't Exist
NAT Rule Counts	The total number of migrated NAT rules	0
Partially Migrated NAT Rule Counts	The total number of partially migrated NAT rules	0
<b>More migration details...</b>		
Interface Counts	The number of updated interfaces	0
Sub Interface Counts	The number of updated subinterfaces	0
Static Routes Counts	The number of static routes	0
Objects Counts	The number of objects created	34
Object Group Counts	The number of object groups created	6
Interface Group Counts	The number of interface groups created	0
Security Zone Counts	The number of security zones created	3
Network Object Reused Counts	The number of objects reused	21
Network Object Rename Counts	The number of objects that are renamed	1
Port Object Reused Counts	The number of port objects that are reused	0
Port Object Rename Counts	The number of port objects that are renamed	0

Table 7: Secure Firewall Migration Tool Performance Data

Data Point	Description	Example Value
Conversion Time	The time taken to parse Check Point configuration lines (in minutes)	14
Migration Time	The total time taken for end-to-end migration (in minutes)	592
Config Push Time	The time taken to push the final configuration (in minutes)	7
Migration Status	The status of the migration of Check Point configuration to management center	SUCCESS



Data Point	Description	Example Value
Error Message	The error message as displayed by the Secure Firewall migration tool	null
Error Description	The description about the stage when the error has occurred and the possible root cause	null

### Telemetry Check Point Example File for r77

The following is an example of a telemetry data file on the migration of Check Point configuration to threat defense:

```
{
  "metadata": {
    "contentType": "application/json",
    "topic": "migrationtool.telemetry"
  },
  "payload": {
    "Check Point_config_stats": {
      "Ipv6_access_rule_counts": 0,
      "Ipv6_bgp_count": 0,
      "Ipv6_nat_rule_count": 0,
      "Ipv6_network_counts": 24,
      "Ipv6_static_route_counts": 6,
      "access_rules_counts": 63,
      "acl_counts": 63,
      "fqdn_based_access_rule_counts": 0,
      "nat_rule_counts": 0,
      "network_object_counts": 143,
      "network_object_group_counts": 31,
      "no_of_fqdn_based_objects": 0,
      "ospfv3_count": 0,
      "port_object_counts": 370,
      "port_object_group_counts": 55,
      "sgt_based_access_rules_count": 0,
      "timerange_based_access_rule_counts": 0,
      "total_unparsed_access_rule_counts": 0,
      "tunneling_protocol_based_access_rule_counts": 0,
      "unparsed_config_count": 15,
      "unsupported_access_rules_count": 0,
      "unsupported_nat_rule_count": 0
    },
    "context_mode": "SINGLE",
    "error_description": null,
    "error_message": null,
    "firewall_mode": "ROUTED",
    "log_info_acl_count": 0,
    "migration_status": "SUCCESS",
    "migration_summary": {
      "access_control_policy": [
        [
          {
            "access_rule_counts": 63,
            "apply_file_policy_rule_counts": 0,
            "apply_ips_policy_rule_counts": 0,
            "apply_log_rule_counts": 0,
            "do_not_migrate_rule_counts": 0,
            "enable_Global-ACL-Policy": true,
            "enable_Zone-Specific-ACL-Policy": false,
            "enable_hit_count": false,
            "expanded_acp_rule_counts": 1,

```

```

        "name": "FTD-Mig-1566804327",
        "partially_migrated_acl_rule_counts": 0,
        "update_rule_action_counts": 0
    }
]
],
"interface_counts": 12,
"interface_group_counts": 0,
"interface_group_manually_created_counts": 0,
"nat_Policy": [
    [
        {
            "NAT_rule_counts": 0,
            "do_not_migrate_rule_counts": 0,
            "name": "Doesn't Exist",
            "partially_migrated_nat_rule_counts": 0
        }
    ]
],
"network_object_rename_counts": 0,
"network_object_reused_counts": 0,
"object_group_counts": 15,
"objects_counts": 54,
"port_object_rename_counts": 0,
"port_object_reused_counts": 5,
"security_zone_counts": 13,
"security_zone_manually_created_counts": 0,
"static_routes_counts": 22,
"sub_interface_counts": 11
},
"migration_tool_version": "2.0.3169",
"rule_change_acl_count": 0,
"source_config_counts": 0,
"source_device_model_number": "Check Point Model Not Exists",
"source_device_serial_number": null,
"source_device_version": "R77.30",
"source_type": "Check Point",
"system_information": {
    "browser": "Chrome/76.0.3809.100",
    "operating_system": "Windows NT 10.0; Win64; x64"
},
"target_device_model": "Cisco Firepower 9000 Series SM-24 Threat Defense",
"target_device_version": "76",
"target_management_type": "6.4.0.4 (build 31)",
"target_management_version": "6.4.0.4 (build 31)",
"template_version": "1.1",
"time": "2019-08-26 12:55:40",
"tool_analytics_data": {
    "objectsplit_100_count": 0
},
"tool_performance": {
    "config_push_time": 725,
    "conversion_time": 29,
    "migration_time": 1020
}
},
"version": "1.0"
}

```

### Telemetry Check Point Example File for r80

The following is an example of a telemetry data file on the migration of Check Point configuration to threat defense :

```

{
  "Check Point_config_stats":{
    "Ipv6_access_rule_counts":0,
    "Ipv6_bgp_count":0,
    "Ipv6_nat_rule_count":0,
    "Ipv6_network_counts":3,
    "Ipv6_static_route_counts":0,
    "access_rules_counts":726,
    "acl_category_count":0,
    "acl_counts":726,
    "fqdn_based_access_rule_counts":0,
    "nat_rule_counts":335,
    "network_object_counts":7645,
    "network_object_group_counts":268,
    "no_of_fqdn_based_objects":0,
    "port_object_counts":1051,
    "port_object_group_counts":66,
    "s2s_vpn_tunnel_counts":0,
    "sgt_based_access_rules_count":0,
    "timerange_based_access_rule_counts":0,
    "total_unparsed_access_rule_counts":0,
    "tunneling_protocol_based_access_rule_counts":0,
    "unparsed_config_count":234,
    "unsupported_access_rules_count":0,
    "unsupported_nat_rule_count":0},
    "context_mode":"SINGLE",
    "error_description":"No data.",
    "error_message":"push failed for object network",
    "firewall_mode":"ROUTED",
    "log_info_acl_count":0,
    "migration_status":"FAIL",
    "migration_summary":{
      "access_control_policy":[
        [
          {
            "access_rule_counts":0,
            "apply_file_policy_rule_counts":0,
            "apply_ips_policy_rule_counts":0,
            "apply_log_rule_counts":0,
            "do_not_migrate_rule_counts":0,
            "enable_Global-ACL-Policy":true,
            "enable_Zone-Specific-ACL-Policy":false,
            "enable_hit_count":false,
            "expanded_acp_rule_counts":1,
            "name":"Doesn't Exist",
            "partially_migrated_acl_rule_counts":0,
            "total_acl_element_counts":389416,
            "update_rule_action_counts":0
          }
        ]
      ]
    },
    "interface_counts":11,
    "interface_group_counts":0,
    "interface_group_manually_created_counts":0,
    "nat_Policy":[
      [
        {
          "NAT_rule_counts":0,
          "do_not_migrate_rule_counts":0,
          "name":"Doesn't Exist",
          "partially_migrated_nat_rule_counts":0
        }
      ]
    ]
  },

```

```

"network_object_rename_counts":0,
"network_object_reused_counts":0,
"object_group_counts":222,"objects_counts":7148,
"port_object_rename_counts":2,
"port_object_reused_counts":30,
"prefilter_control_policy":[
  [
    {
      "do_not_migrate_rule_counts":0,
      "name":null,
      "partially_migrated_acl_rule_counts":0,
      "prefilter_rule_counts":0
    }
  ]
],
"security_zone_counts":11,
"security_zone_manually_created_counts":0,
"static_routes_counts":0,
"sub_interface_counts":8,
"time_out":false},
"migration_tool_version":"2.1.4283",
"mtu_info":{"interface_name":null,
"mtu_value":null},
"rule_change_acl_count":0,
"selective_policy":
  {
    "acl":true,
    "acl_policy":true,
    "application":false,
    "csm":false,
"interface":true,
"interface_groups":true,
"migrate_tunneled_routes":false,
"nat":true,
"network_object":true,
"policy_assignment":true,
"populate_sz":false,
"port_object":true,
"routes":true,
"security_zones":true,
"unreferenced":true},
"source_config_counts":0,
"source_device_model_number":"Check Point Model Not Exists",
"source_device_serial_number":null,
"source_device_version":"R77.30",
"source_type":"Check Point",
"system_information":
  {
    "browser":"Chrome/80.0.3987.163","operating_system":
    "Macintosh; Intel Mac OS X 10_15_4"},
    "target_device_model":"Cisco Firepower 4110 Threat Defense",
    "target_device_version":"76",
    "target_management_type":"6.5.0 (build 63)",
    "target_management_version":"6.5.0 (build 63)",
    "template_version":"1.1",
    "time":"2020-04-16 04:50:05",
    "tool_analytics_data":{"objectsplit_100_count":6},
    "tool_performance":
      {
        "config_push_time":1457,
        "conversion_time":279,
        "migration_time":2637
      }
  }
}

```



## CHAPTER 4

# Troubleshooting Migration Issues

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- [Troubleshooting for the Secure Firewall Migration Tool, on page 65](#)
- [Logs and Other Files Used for Troubleshooting, on page 66](#)
- [Troubleshooting Check Point File Upload Failures, on page 66](#)

## Troubleshooting for the Secure Firewall Migration Tool

A migration typically fails during the Check Point configuration file upload or during the push of the migrated configuration to management center.

Some of the common scenarios where the migration process fails for a Check Point configuration are:

- Files missing from the Check Point Config.zip.
- Invalid files are detected by the Secure Firewall migration tool in the Check Point Config.zip
- If the Check Point configuration file is of any compressed file type other than .zip.

### Secure Firewall Migration Tool Support Bundle

The Secure Firewall migration tool provides the option to download a support bundle to extract valuable troubleshooting information like log files, DB, and configuration files. Perform the following:

1. On the **Complete Migration** screen, click the **Support** button.  
The Help support page appears.
2. Check the **Support Bundle** check box and then select the configuration files to download.



---

**Note** The Log and dB files are selected for download by default.

---

3. Click **Download**.  
The support bundle file is downloaded as a .zip to your local path. Extract the Zip folder to view the log files, DB, and the Configuration files.
4. Click **Email us** to email the failure details for the technical team.  
You can also attach the downloaded support files to your email.

- Click **Visit TAC page** to create a TAC case in the Cisco support page.



**Note** You can open a TAC case at any time during the migration from the support page.

## Logs and Other Files Used for Troubleshooting

You can find information that is useful for identifying and troubleshooting issues in the following files.

File	Location
Log file	<migration_tool_folder>\logs
Pre-migration report	<migration_tool_folder>\resources
Post-migration report	<migration_tool_folder>\resources
unparsed file	<migration_tool_folder>\resources

## Troubleshooting Check Point File Upload Failures

If the Check Point configuration file fails to upload, the reason is typically because the Secure Firewall migration tool could not parse one or more lines in the file.

You can find information about the errors that caused the upload and parsing failure in the following locations:

- Unparsed file—Look at the end of the file to identify the last ignored line of the Check Point configuration file that was successfully parsed.
- Unexpected file—Invalid files detected for Check Point. For example, when zipped using Mac OS, Mac system files are created. Remove the Mac files.
- (For r75–r77.30 only) Incorrectly named files—When Security Policy and NAT Policy files are not named correctly for Check Point. Rename ACL and NAT files correctly.
- Missing files—Some files are missing from the Check Point config.zip file. Add the required files.



**Note** For r77, manually extract the missing configuration file. For more information, see [Export the Check Point Configuration Files for r77](#).

For r80, use Live Connect to extract the correct configuration file for the secure Firewall migration tool. For more information, see [Export the Check Point Configuration Files for r80](#).

## Troubleshooting Example for Check Point: Cannot Find Member of Object Group (For r75–r77.30 Only)

In this example, the Check Point configuration file upload and parsing failed because of error in the configuration of an element.

**Step 1** Review the error messages to identify the problem.

This failure generates the following error messages:

Location	Error Message
Secure Firewall migration tool message	<p>Check Point config files parsed with errors.</p> <p>See the <a href="#">Review the Pre-Migration Report</a> error section for parsing errors and <a href="#">Review the Post-Migration Report for Check Point and Complete the Migration</a> for push errors that occurs during the push stage.</p>
Log file	<pre>[ERROR   objectGroupRules] &gt; "ERROR, SERVICE_GROUP_RULE not applied for port-group object [services_epacity_nt_abc] as CheckPoint object [ica] does not exist in &lt;service&gt; table;"  [INFO   objectGroupRules] &gt; "Parsing object-group service:[services_gvxs06]"  [INFO   objectGroupRules] &gt; "Parsing object-group service:[services_iphigenia]"  [INFO   objectGroupRules] &gt; "Parsing object-group service:[Services_KPN_ISP]"</pre>

**Step 2** Open the Check Point `services.xml` file.

**Step 3** Search the object-group with name as `services_gvxs06`.

**Step 4** Create the missing member for the object-group using the smart dashboard.

**Step 5** Export the configuration file again. For more information, see [Export the Check Point Configuration Files for r77](#).

**Step 6** If there are no more errors, upload the new Check Point configuration zip file to the Secure Firewall migration tool and continue with the migration.

## Troubleshooting Example for Check Point (r80) for Live Connect

### Example 1: Request details on Check Point Security Manager.

In this example, the Secure Firewall migration tool requests the details for Check Point Security Manager.

Review the error messages to identify the problem. This failure generates the following error messages:

Location	Error Message
Secure Firewall migration tool message	Screen requests to provide details for Check Point Security Manager.

Location	Error Message
Log file	[ERROR   connect_cp] > "Unable to extract the Extracted-objects.json file due to credentials with insufficient privileges, time-out issues and so on. Refer Secure Firewall migration tool UG for more info."  127.0.0.1 - - [20/Jul/2020 17:20:43] "POST /api/CP/connect HTTP/1.1" 500 -

Incorrect credentials. Follow the steps as mentioned to pre-stage credentials. The credentials used must have a */bin/bash* shell profile on Check Point Gaia for Check Point Security Manager. The same credentials must be staged on Check Point Smart Console Application for Check Point Security Manager with Super User privileges for a normal deployment. The privileges must be Super User if using multi-domain deployment. For more information, see [Pre-Stage the Check Point \(r80\) Devices for Configuration Extraction Using Live Connect](#).

### Example 2: Bad File Format

In this example, the Secure Firewall migration tool migration is blocked due to bad file format.

Review the error messages to identify the problem. This failure generates the following error messages:

Location	Error Message
Secure Firewall migration tool message	Blocked
Log file	[ERROR   cp_device_connection] > "Bad file format"  2020-07-20 17:10:57,347 [ERROR   connect_cp] > "Unable to download .tar file."  127.0.0.1 - - [20/Jul/2020 17:10:57] "GET /api/CP/generate_tar_file?package=Standard HTTP/1.1" 500 -

Incorrect credentials. Follow the steps as mentioned to pre-stage credentials. The credentials used must have a */bin/bash* shell profile on Check Point Gaia for Check Point Security Manager. The same credentials must be staged on Check Point Smart Console Application for Check Point Security Manager with Super User privileges. The Super User privileges must be granted if using multi-domain deployment. For more information, see [Pre-Stage the Check Point \(r80\) Devices for Configuration Extraction Using Live Connect](#).

### Example 3: Blocked VSX Feature is UNSUPPORTED in Threat Defense

In this example, the Secure Firewall migration tool migration fails due to the blocked VSX feature in the threat defense.

Review the error messages to identify the problem. This failure generates the following error messages:

Location	Error Message
Secure Firewall migration tool message	Blocked VSX Feature is UNSUPPORTED in FTD.
Log file	[ERROR   config_upload] > "VSX Feature is UNSUPPORTED in FTD"  Traceback (most recent call last)



**Problem Description**—This error occurs as the **fw vsx stat** command is deprecated starting with Check Point r80.40.

As a workaround, follow these steps:

1. Unzip the *config.zip* file.
2. Open the *networking.txt* file.

Here is an example of the sample output:

```
firewall> fw vsx stat
Deprecated command, Please see sk144112 for alternative
Deprecated commands: cphaprob cpinfo cplic fw ips raidconfig fwaccel
```

Replace this manually as follows:

```
firewall> fw vsx stat
VSX is not supported on this platform
```

3. Select all the files and compress them to .zip extension.





## CHAPTER 5

# Secure Firewall Migration Tool FAQs

- [Secure Firewall Migration Tool Frequently Asked Questions, on page 71](#)

## Secure Firewall Migration Tool Frequently Asked Questions

- Q.** What are the new features supported on the Secure Firewall migration tool for Release 3.0.1?
- A.** The Secure Firewall migration tool 3.0.1 now provides support for Secure Firewall 3100 series only as a destination device for migrations from Check Point.
- Q.** What are the new features supported on the Secure Firewall migration tool for Release 3.0?
- A.** Migration to Cloud-delivered Firewall Management Center.
- Q.** What are the new features supported on the Secure Firewall migration tool for Release 2.5.2?
- A.** ACL Optimization for Check Point.
- Q.** What are the hardware limitations for the conversion from Check Point to threat defense?
- A.** If the configuration files are compatible with the Check Point Web Visualization Tool and the FMT-CP-Config-Extractor\_v4.0.1-8248 Tool, you should be able to migrate the source Check Point.
- Q.** Can I use the configuration that is exported from Check Point r76SP and migrate it to 4100 and 6100 Firepower platforms?
- A.** Yes. Support for r75 to r77.30 is provided on all platforms.
- The platform is supported as long as the Check Point Web Visualization Tool is available.
- Q.** How do you handle negated objects in rules on Check Point?
- A.** If the object is of Exclusion Type object/group, then the ACL conversion follows **permit** and **block** combination. This conversion is supported by ACL though a network object/group of Exclusion type is unsupported. For example, if a Check Point ACE rule has object-group of Exclusion type referred.
- If the Check Point rule action is **permit**:
    - ACE must have an action to **Deny** for the Object-Group which is referred under `<exception></exception>` XML tag, append the rule with a *Rule for Exception Object-Group* comment.
    - ACE must have an action to **Allow** for the Object-Group which is referred under the `<base></base>` XML tag, append the rule with a *Rule for Exception Object-Group* comment.
  - If the Check Point rule action is **Deny/Reset**:

- ACE must have an action to **permit** for the Object-Group which is referred under `<exception></exception>` XML tag, append the rule with a "Rule for Exception Object-Group" comment.
- ACE must have an action of **Block(Deny)/Block** with **Reset(Reject)** for the Object-Group which is referred under the `<base></base>` XML tag, append the rule with a *Rule for Exception Object-Group* comment.

- Q.** Does the Secure Firewall migration tool support ACE with Negate Cell? If not how are those rules handled by the Secure Firewall migration tool?
- A.** ACEs with negate cells are not supported by the Secure Firewall migration tool and they are converted by treating the ACE as a normal ACE. These issues will be resolved in the upcoming releases.
- Q.** You see Failed to bind to the DB. Access denied error. What would you do?
- A.** Perform the following:
- Open the Check Point Gaia Console for Management Server.
  - Navigate to the users and roles settings on the Gaia Console.
  - Create a new username credential on the Check Point Management Server Gaia Console that has an admin role with the home directory `/home` and Shell `/etc/cli.sh` parameters.

- Q.** You see the parsing count as 0, when parsing the Check Point configuration through the Secure Firewall migration tool. What would you do?
- A.** Perform either of these steps:

Extract the *networking.txt* file using the FMT-CP-Config-Extractor\_v4.0.1-8248 Tool and avoid the hand coded *networking.txt* file.

Or

There are chances that the logging is enabled for any reasons on the check point security gateway from where the outputs for the *networking.txt* file are exported. The extraneous information that is added on the *networking.txt* file causes such an issue because the logging is enabled. If so, perform the following:

- Check the *networking.txt* file.
  - Fix the file by removing the appended extra logs line.
  - Upload the new zip to the Secure Firewall migration tool.
- Q.** Can you migrate configuration from a Check Point using VSX?
- A.** You can export the specific policy packages pertaining to virtual systems, one virtual system at a time. For example, when you export the configuration using the Web Visualization Tool (r75–r77.30), it exports the policy elements for all the virtual system. Hence, retain only the NAT and Policy files for the Virtual System that you want to migrate along with the *index.xml*, *communities.xml*, *network\_objects.xml*, and *networking.txt* (from the Security Gateway for the policy that gets migrated) to make it a complete configuration.

For r80, select the policy package for a particular Virtual System when you connect to the Check Point Security Manager through Live Connect that you want to migrate during [step 5](#) when you select the Check Point policy package and derive the configuration.

When you also connect to the Check point Security Gateway, provide the correct details of the correct Check Point Virtual System Check Point Firewall Package corresponding to the Check Point Policy Package.

If you still face issues, contact Cisco TAC to create a TAC case for these failures.

**Q.** Can you extract the Check Point (r80) configuration manually?

**A.** No. It is not possible to extract the Check Point (r80) configuration manually. Use Live Connect on the Secure Firewall migration tool to derive the complete r80 configuration. When you extract the configuration using manual workarounds or using a Check Point (r80) configuration that is not configured in the Secure Firewall migration tool, the configuration is incomplete and also gets migrated as unsupported, gets migrated partially, or even results in failed migrations.

For more information, see [Procedure to Export the Check Point Configuration Files for r80](#).

**Q.** What are the ways to pre-stage the credentials for different Check Point (r80) deployment types?

**A.** You can configure the credentials, before migration, on the Check Point (r80) devices in any one of the following ways:

- [Export from Distributed Check Point Deployment](#)
- [Export from Standalone Check Point Deployment](#)
- [Export from Multi-Domain Check Point Deployment](#)

**Q.** I am using a Custom API port on Check Point r80 for Check Point Security Manager. What must I do to extract the configuration completely?

**A.** If you are using a customer API port on the Check Point Smart Manager for using Check Point API, perform these:

- Check the **Check Point Multi-Domain Deployment** check box on the **Check Point Security Manager** page of Live Connect.
- Add the IP Address of Check Point CMA and API port details if using the multi-domain deployment.
- Retain the IP Address of the Check Point Security Manager if it is a general deployment and enter the details of the Custom API Port.

**Q.** I have a Check Point Gateway of version r80.40 and the extraction through Live Connect is fine. But, when parsing, I get the error:"Blocked VSX Feature is UNSUPPORTED in FTD ". What must I do?

**A.** This error occurs as the **fw vsx stat** command is deprecated starting with Check Point r80.40. The Secure Firewall migration tool is unable to parse the values after executing the **fw vsx stat** command when parsing *networking.txt* file.

As a workaround, follow these steps:

1. Unzip the *config.zip* file.
2. Open the *networking.txt* file.

Here is an example of the sample output:

```
firewall> fw vsx stat
Deprecated command, Please see sk144112 for alternative
Deprecated commands: cphaprob cpinfo cplic fw ips raidconfig fwaccel
```

Replace this manually as follows:

```
firewall> fw vsx stat  
VSX is not supported on this platform
```

3. Select all the files and compress them to .zip extension.