



# NetBrain<sup>®</sup> Integrated Edition 8.0

## Checkpoint Firewall R80 Discovery

# Overview

You can discover Checkpoint Firewall R80 to your NetBrain domains and visualize the device data and topology on dynamic maps. This guide introduces the way of discovering Checkpoint Firewall R80 to your NetBrain domain.

## Supported Firewall Modes

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The system can discover Checkpoint Firewall R80 in the following deployment modes:

- Physical Mode
- Cluster Mode
- VSX
- VSX Cluster

**Note:** NetBrain does not support the firewalls in the Bridge mode.

## Discovery Flow

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The pseudo-code below describes a high-level flow to discover Checkpoint Firewall R80, including configurations at both [Checkpoint Manager](#) side and [NetBrain](#) side.

### 1. Checkpoint Manager Side:

- 1.1 Set account permission.
- 1.2 Enable and set API access permission.

### 2. NetBrain Side:

- 2.1 Configure API Server Manager for Checkpoint Firewall R80.

### 3. Discover Checkpoint Firewall R80

### 4. Run a benchmark for Checkpoint Firewall R80

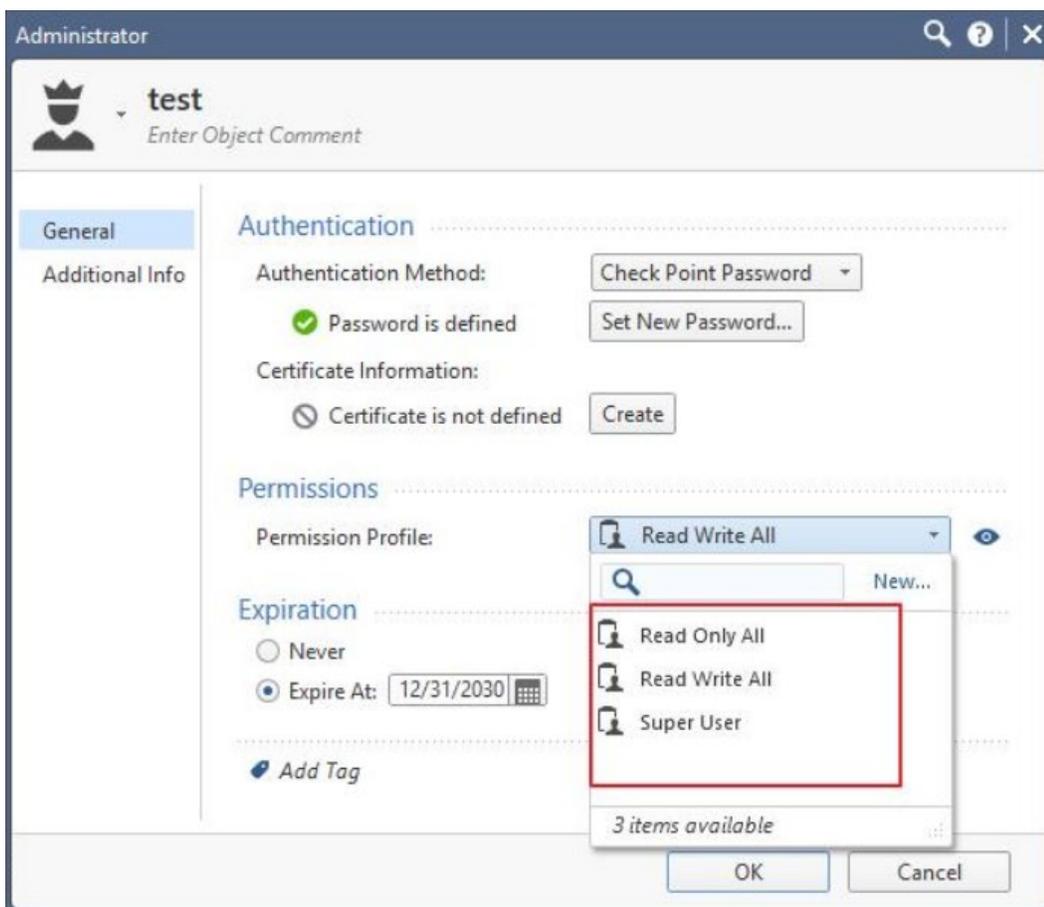
# 1. Configurations at Checkpoint Manager Side

Before discovering Checkpoint Firewall R80, you need to set up an account and API access permission in your Checkpoint Manager so that your NetBrain system has access to the Checkpoint Management Domain. The configurations for a single domain and multi-domain are somewhat different. Select the configuration steps based on your actual domain scenario.

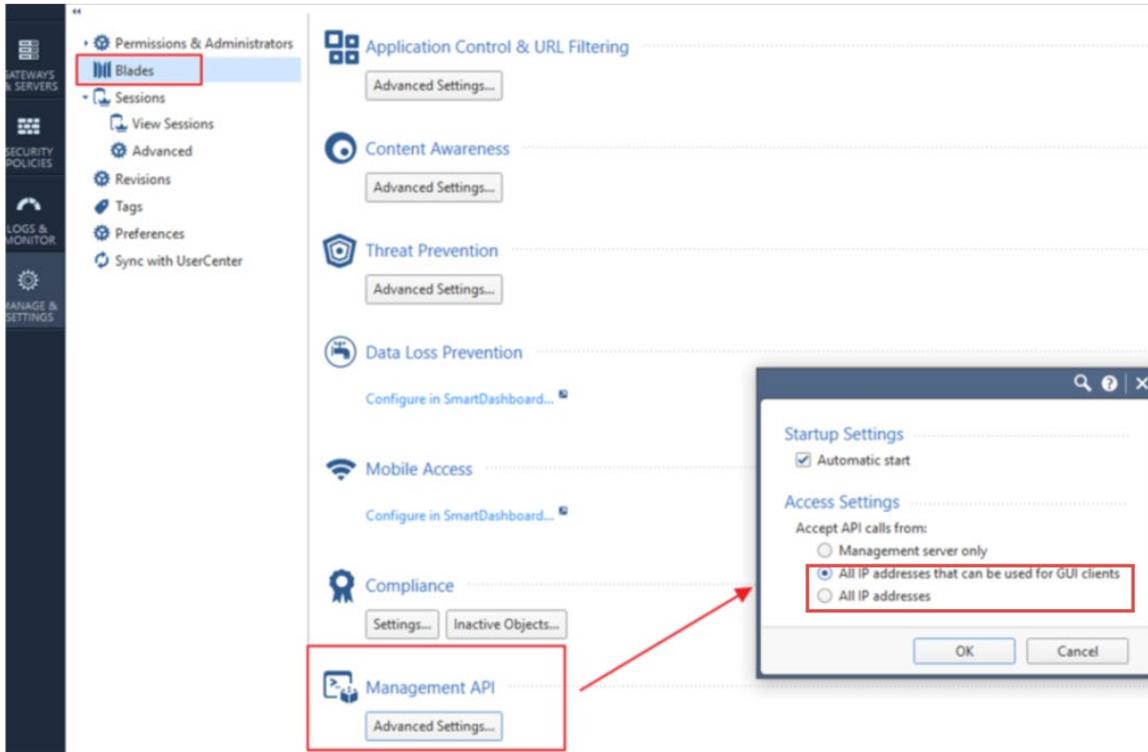
- [Single Domain Configurations](#)
- [Multi-domain Configurations](#)

## Single Domain Configurations

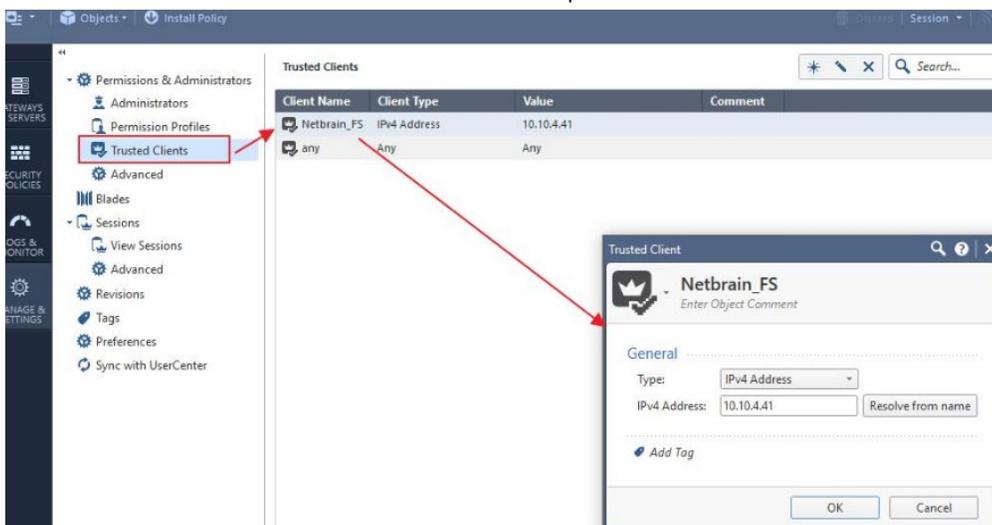
1. Assign permissions to the account that you will use for your NetBrain system to access the Checkpoint data. You can select any of the three permissions shown in the figure below.



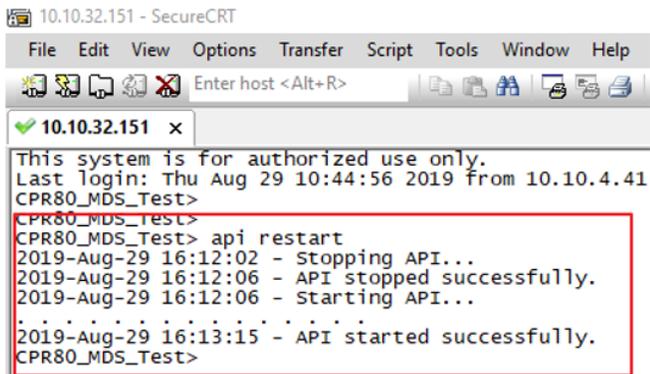
2. Enable API access to accept API calls from your NetBrain Front Server. Select the **All IP addresses** or **All IP addresses that can be used for GUI clients** option.



**Note:** If you select the **All IP address that can be used for GUI clients** option, add the IP address of NetBrain Front Server to the Trusted Clients so that it has the GUI permission.



3. Log into Smart Dashboard via SSH with an SSH/Telnet tool and execute the `api restart` command to make API access permission take effect.



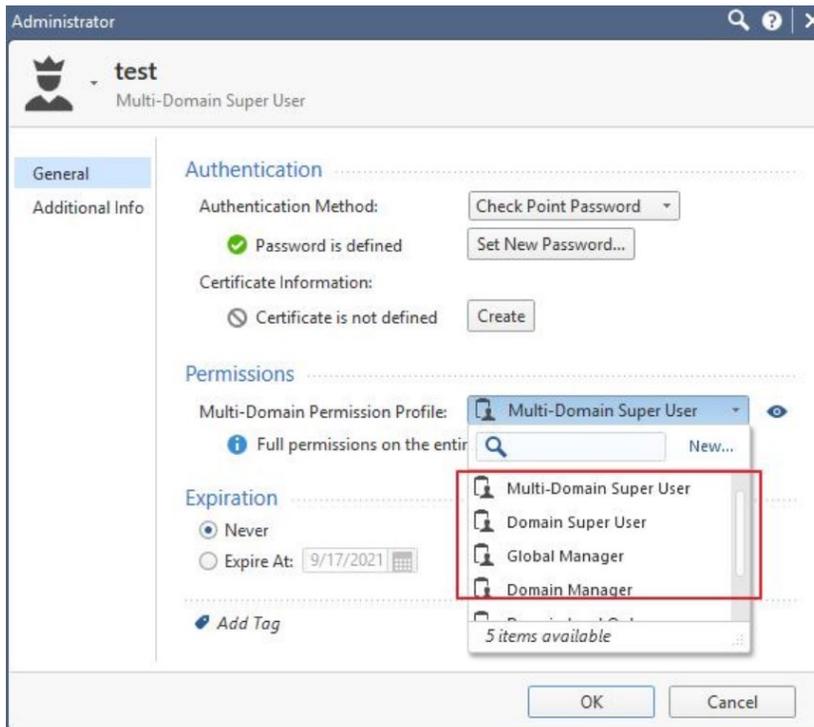
```
10.10.32.151 - SecureCRT
File Edit View Options Transfer Script Tools Window Help
Enter host <Alt+R>
10.10.32.151 x
This system is for authorized use only.
Last login: Thu Aug 29 10:44:56 2019 from 10.10.4.41
CPR80_MDS_Test>
CPR80_MDS_Test> api restart
2019-Aug-29 16:12:02 - Stopping API...
2019-Aug-29 16:12:06 - API stopped successfully.
2019-Aug-29 16:12:06 - Starting API...
2019-Aug-29 16:13:15 - API started successfully.
CPR80_MDS_Test>
```

## Multi-Domain Configurations

1. Assign permissions to the account that you will use for your NetBrain system to access the Checkpoint data.

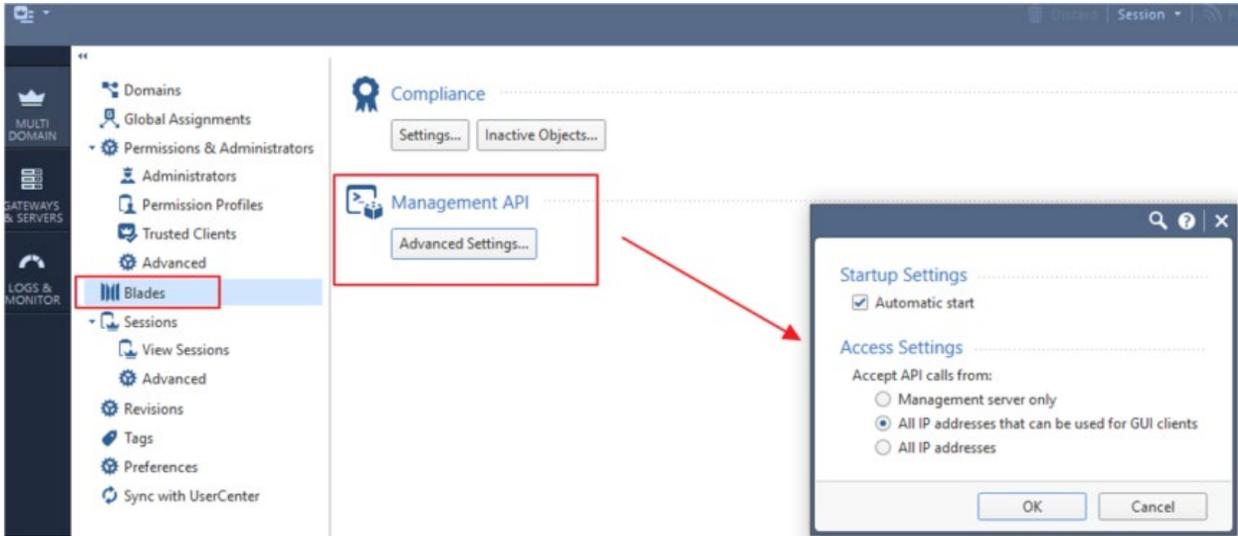
One of the following permissions is required:

- Domain Manager
- Global Manager
- Domain Super User
- Multi-Domain Super User

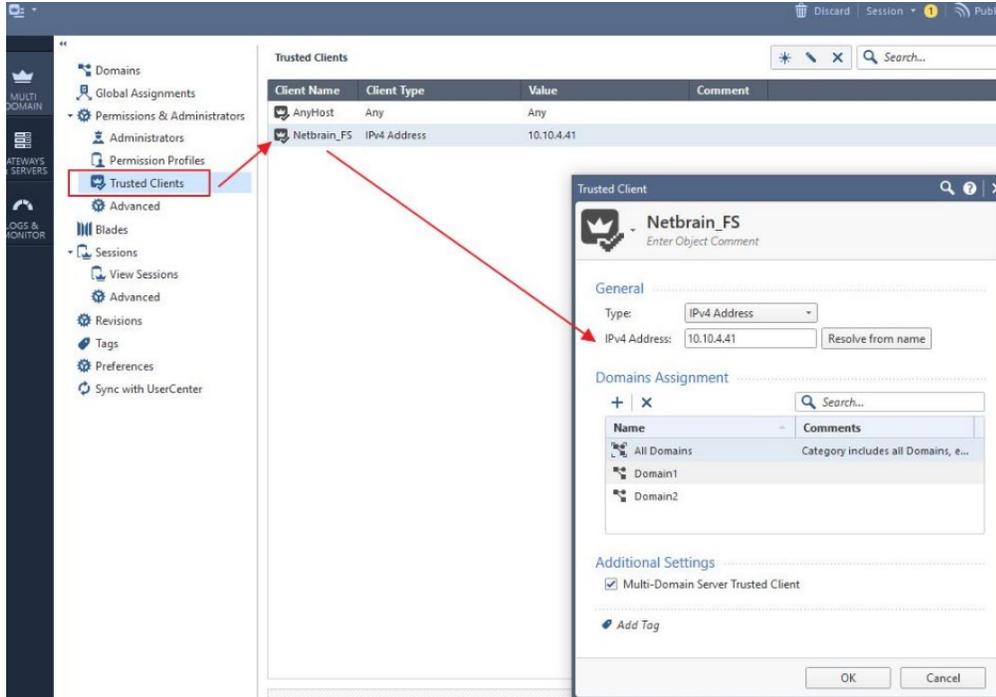


**Note:** If you cannot discover the devices or retrieve data with a permission, promote the permission to give a try.

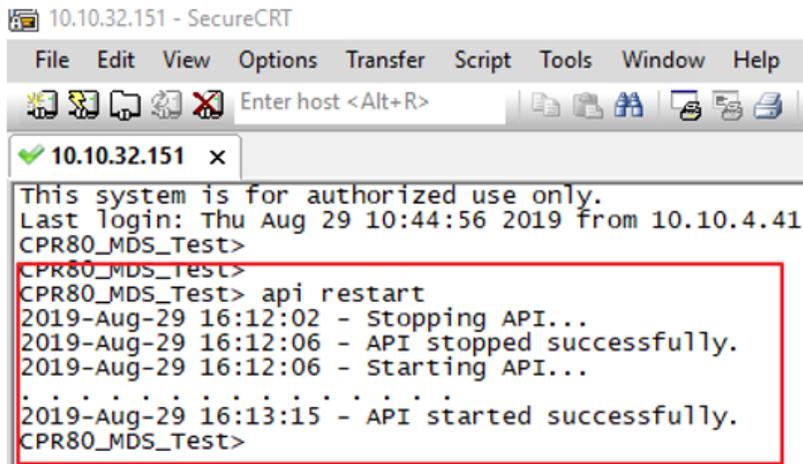
2. Enable API access to accept API calls from your NetBrain Front Server. Select the **All IP addresses** or **All IP addresses that can be used for GUI clients** option.



**Note:** If you select the **All IP address that can be used for GUI clients** option, add the IP address of NetBrain Front Server to the Trusted Clients so that it has the GUI permission.



3. Log into Smart Dashboard via SSH with an SSH/Telnet tool and execute the `api restart` command to make API access permission take effect.



The screenshot shows a SecureCRT terminal window titled "10.10.32.151 - SecureCRT". The window has a menu bar with "File", "Edit", "View", "Options", "Transfer", "Script", "Tools", "Window", and "Help". Below the menu bar is a toolbar with icons for file operations and a text input field labeled "Enter host <Alt+R>". The terminal output is as follows:

```
10.10.32.151 x
This system is for authorized use only.
Last login: Thu Aug 29 10:44:56 2019 from 10.10.4.41
CPR80_MDS_Test>
CPR80_MDS_Test>
CPR80_MDS_Test> api restart
2019-Aug-29 16:12:02 - Stopping API...
2019-Aug-29 16:12:06 - API stopped successfully.
2019-Aug-29 16:12:06 - Starting API...
2019-Aug-29 16:13:15 - API started successfully.
CPR80_MDS_Test>
```

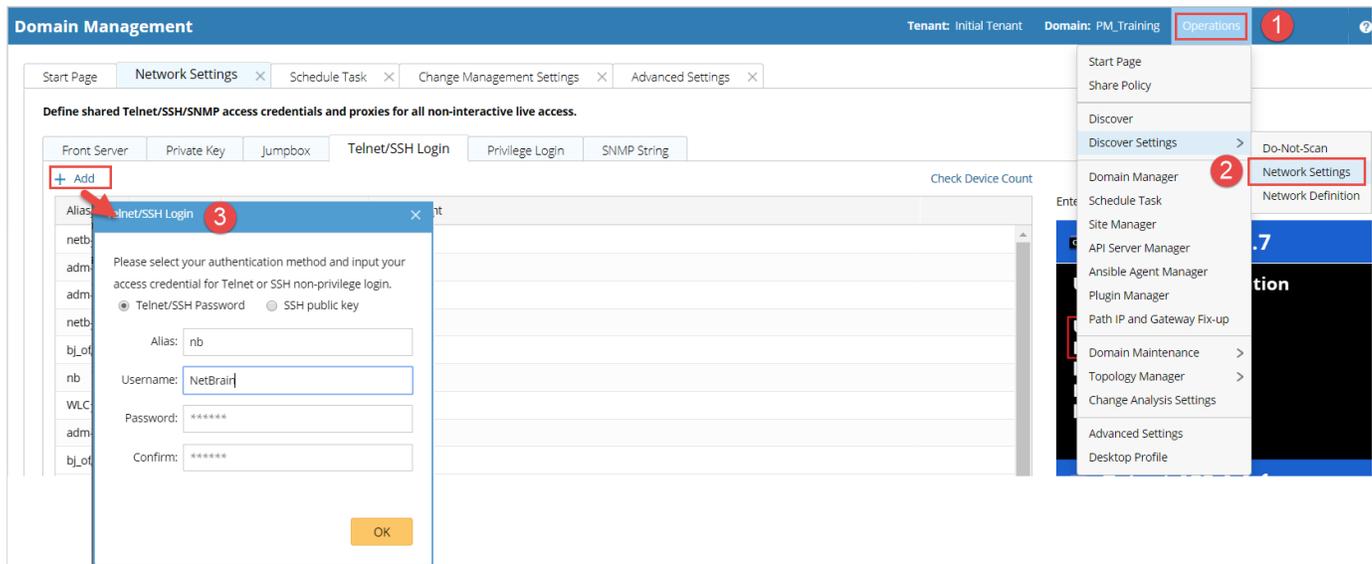
The terminal output from the `api restart` command is highlighted with a red rectangular box.

## 2. Configurations at NetBrain Side

NetBrain discovers Checkpoint Firewall R80 using both Checkpoint Manager APIs and CLI/SNMP. After completing configurations at Checkpoint Manager side, you need to configure Network Settings and an API Server Manager for Checkpoint Firewall R80 in NetBrain.

### Configure Network Settings

Configure network settings, such as SSH/Telnet Login, Privilege Login, and SNMP String credentials, for Checkpoint Firewall R80.

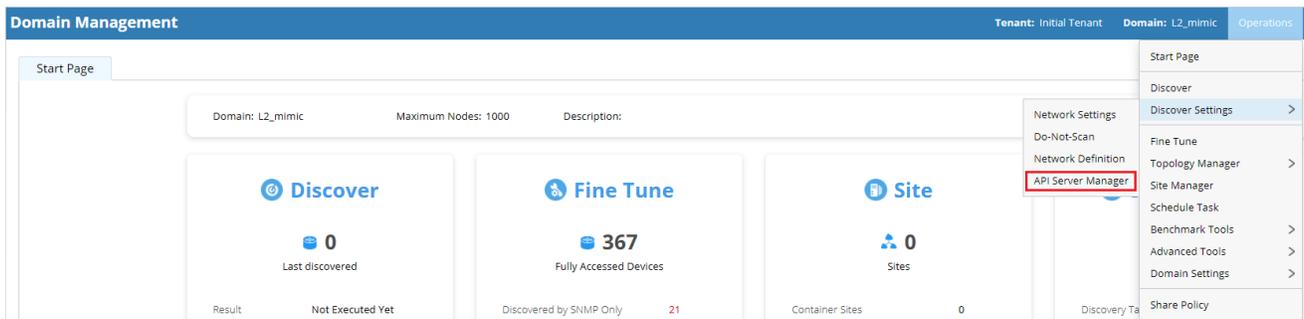


### Configure API Server Manager

The API Server Manager contains the endpoints and credentials to access Checkpoint Management Domain during the discovery.

Follow the steps below to configure the API Server Manager:

1. In the Domain Management page, select **Operations > Discover Settings > API Server Manager** from the quick access toolbar.

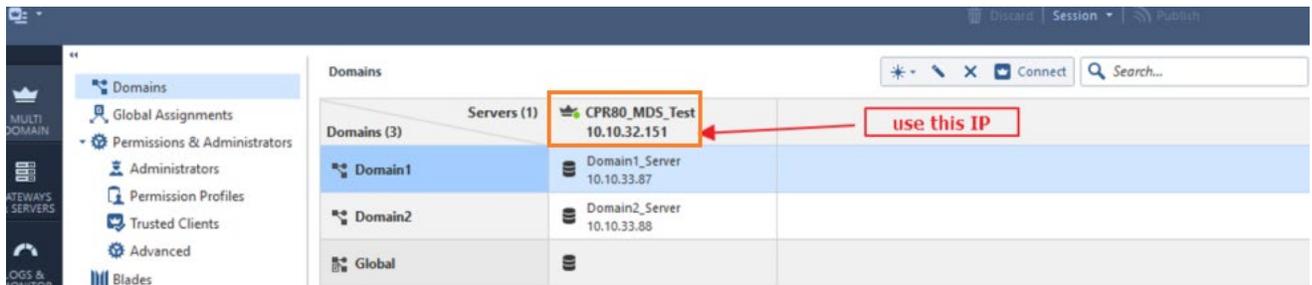


2. Click **Add** on the **API Server Manager** tab. The **Add External API Server** dialog opens.

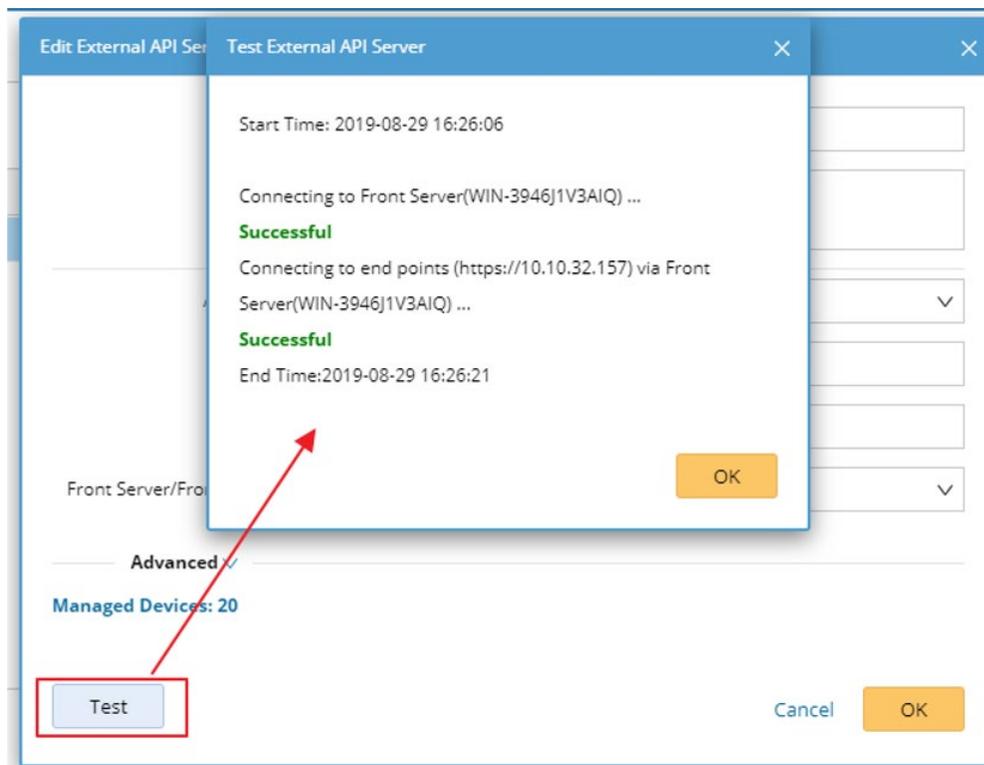
The screenshot shows the 'Add External API Server' dialog box. It has a blue header with the title 'Add External API Server' and a close button (X). The form contains several fields: 'Server Name' (text input with 'Checkpoint R80'), 'Description' (text area with 'Discover checkpoint firewall R80 to a domain.'), 'API Source Type' (dropdown menu with 'CheckPoint R80 API'), 'Endpoints' (text input with 'https://10.10.32.157'), 'Username' (text input with 'admin'), 'Password' (password input with '\*\*\*\*\*'), and 'Front Server/Front Server Group' (dropdown menu with 'WIN-BHURUGCTRE6(10.10.17.77)'). Below these fields, there is an 'Advanced' section with a dropdown arrow. At the bottom, there is a 'Managed Devices: 0' indicator, a 'Test' button, a 'Cancel' button, and an 'OK' button.

- 1) Enter a unique name in the **Server Name** field.
- 2) Enter a description of the API server.
- 3) Select **CheckPoint R80 API** from the **API Source Type** drop-down menu.

- 4) In the **Endpoints** field, enter the address of the Checkpoint Management Domain. The format is `https://IP`. Note that use the multi-domain server IP address upon checkpoint multiple domains.



- 5) In the **Username** and **Password** fields, enter the username and password of the account that you have configured in the Checkpoint Manager.
- 6) Select a Front Server that can connect to the Checkpoint Manager from the **Front Server** drop-down menu.
- 7) Click **Test** to check connectivity between your NetBrain Front Server and Checkpoint Management Domain.



- 8) Click **OK**.

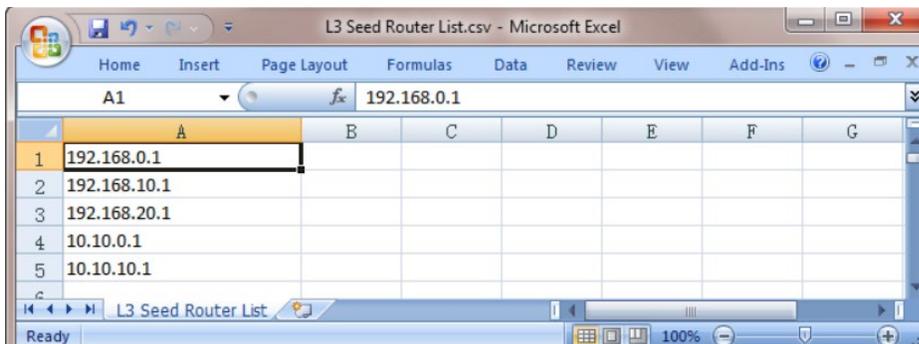
### 3. Discovering Checkpoint Firewall R80 in NetBrain

After finishing configurations at Checkpoint Manager side and NetBrain side, you can get started to discover Checkpoint Firewall R80 to one of your NetBrain domains.

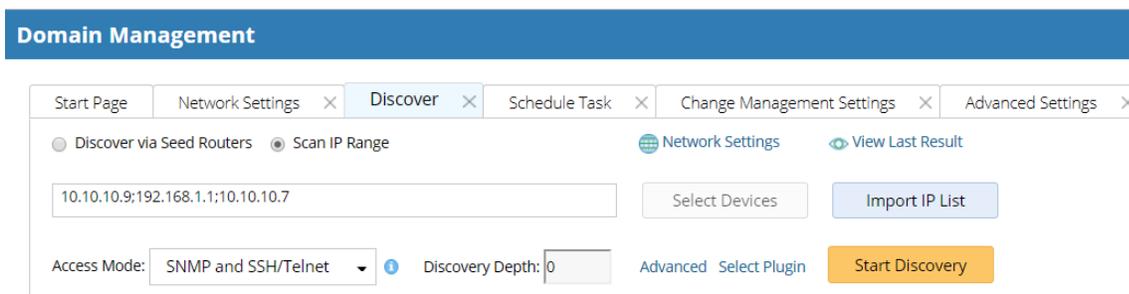
**Note:** To ensure that all CheckPoint Firewall R80 can be correctly discovered to your NetBrain domain, execute the discovery via CLI/SNMP first and then re-run a discovery via API after the CLI/SNMP discovery is complete.

1. Discover Checkpoint Firewall R80 via SNMP/CLI in NetBrain:

- 1) In the **Domain Management** page, select **Operations > Discover** from the quick access toolbar.
- 2) On the **Discover** tab, select **Scan IP Range**.
- 3) Enter all management IP addresses of your Checkpoint Firewall R80 devices and separate each IP address with a semicolon. You can also enter all IP address by importing an IP list in CSV format.



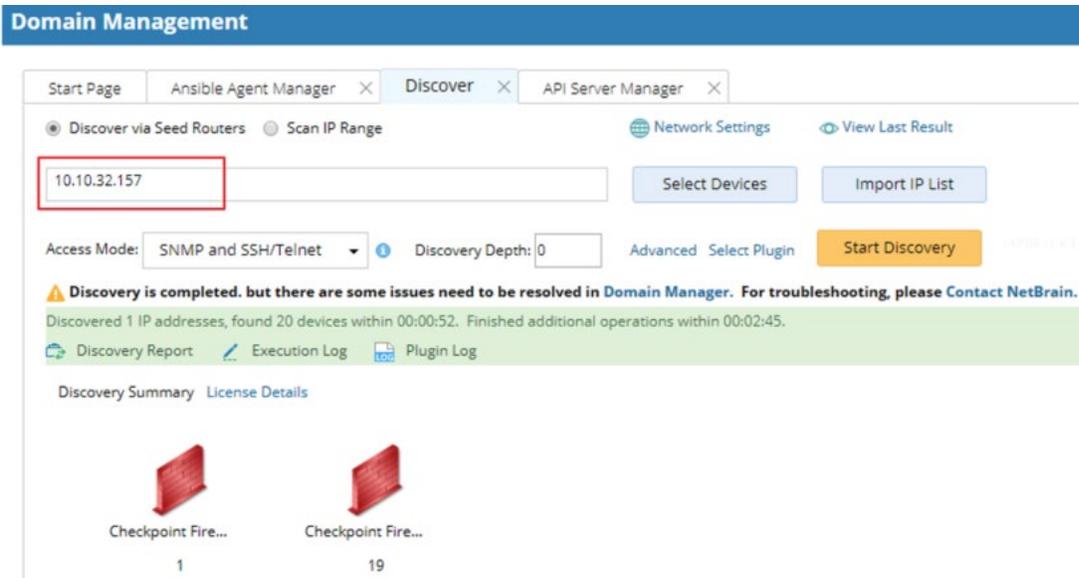
- 4) Keep other options as default and click **Start Discovery**.



2. Re-discover Checkpoint Firewall R80 via API after the SNMP/CLI discovery is completed.

- 1) Enter the IP address of the Endpoint (excluding the [https://IP](#)) that you have configured in the [API Server Manager](#).

2) Keep other options as default and click **Start Discovery**.



**Note:** The discovery adds Checkpoint Firewall R80 to your NetBrain domain and only retrieves very basic information via Checkpoint APIs. After the discovery, you need to [run a benchmark](#) to retrieve more data of the devices, such as configuration files, routing table and NCT data (Policy Table/NAT Table/IPsec VPN Table).

## 4. Run a benchmark to Update Data and Build Topology

After the discovery is done, you need to run a benchmark task to update the data of the Checkpoint Firewall R80 devices and build topology in your NetBrain system.

The screenshot shows the 'Edit Benchmark Task' window. At the top, there are input fields for 'Task Name' (Basic System Benchmark) and 'Description' (Default system benchmark task). Below this is a progress bar with steps: Frequency, Device Scope (highlighted), Retrieve Live Data, CLI Commands, Additional Operations after Benchmark, Plugins, and Summary. The main area is divided into two sections. The left section is titled 'Select Device' and has three radio buttons: 'All Devices' (selected), 'Device Group', and 'Site'. Below these are several device categories with counts: WLC(2), LAN Switch(1), Firewall(3), L3 Switch(54), Router(18), End System(56), Unclassified Device(5), and WAP(3). The right section is titled 'Select external API servers to retrieve data of SDN nodes' and has a checked checkbox. Below it is a table with columns: API Source Type, Server Name, Endpoint, and Description. At the bottom left, there is a label 'Exclude Device Groups: <Please Select>'. At the bottom right, there are 'Cancel' and 'Submit' buttons.

API Source Type	Server Name	Endpoint	Description
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