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Kubernetes Administration Guide

FortiManager 7.2.0

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April 11, 2022
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02-720-794632-20220411

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Security Fabric connector integration with Kubernetes

You can use FortiManager to create Fabric connectors for Kubernetes, and then install the Fabric connectors to FortiOS.

The Fabric connectors in FortiManager define the type of connector and include information for FortiOS to communicate with and authenticate with the products. In some cases the FortiGate must communicate with products through the Fabric connector, and in other cases the FortiGate communicates directly with the products.

FortiOS works with the Fabric connector to communicate with Kubernetes.

For information about the Fabric connector, see the Fortinet Document Library.

You cannot import a policy package for the Fabric connector from FortiOS to FortiManager.

Following is an overview of creating Fabric connectors for Kubernetes using FortiManager:

1. Create a Fabric connector. See Creating a Fabric connector for Kubernetes on page 4.
2. Import address names from Kubernetes to the Fabric connector. See Importing address names to a Fabric connector on page 5. FortiManager imports the address names and converts them to dynamic firewall address objects. The objects do not include IP addresses and display in *Firewall Objects* > *Addresses*.
3. In the policy package in which you are creating the new policy, create an IPv4 policy and include the firewall address objects for Kubernetes. See Creating an IP address policy on page 5.
4. Install the policy package to FortiOS. See Installing a policy package on page 6.
   FortiGate communicates with Kubernetes to dynamically populate the firewall address objects with IP addresses.

Creating a Fabric connector for Kubernetes

With FortiManager, you can create a Fabric connector for Kubernetes and import address names from Kubernetes to automatically create dynamic objects that you can use in policies.

When you install the policies to one or more FortiGates, FortiOS uses the information and the Fabric connector to communicate with Kubernetes and dynamically populate the objects with IP addresses.

When you create a Fabric connector for Kubernetes, you specify how FortiOS can communicate with Kubernetes through the Fabric connector. As a result, you are configuring communication and authentication information for the Fabric connector.

If you have enabled ADOMs, you can create multiple Fabric connectors per ADOM. Each Fabric connector requires a unique IP address.

This configuration requires the following:

- FortiManager version 6.0 ADOM or later
- FortiManager is managing the FortiGate.

- You have configured the managed FortiGate to work with Kubernetes.

To create a Fabric connector object for Kubernetes:

1. Go to *Fabric View* > *Fabric Connectors*.
2. Click *Create New*. The *Create New Fabric Connector* wizard displays.
3. Under *SDN*, select *Kubernetes*, and click *Next*.
4. Configure the following options, then click *OK*:

Name	Enter the Fabric connector name.
IP	Enter the Fabric connector IP address.
Port	Identify the port used for the Fabric connector: • Click *Use Default* to use the default port. • Click *Specify* and type the port number.
Secret Token	Specify a secret token for the Fabric connector.
Update Interval(s)	Specify the update interval for the Fabric connector: • Click *Use Default* to use the default port. • Click *Specify* and type the port number.
Status	Toggle *On* to enable the Fabric connector. Toggle *OFF* to disable the Fabric connector.

Importing address names to a Fabric connector

After you configure a Fabric connector, you can import dynamic objects from cloud platforms, such as Kubernetes, to the Fabric connector, and dynamic firewall address objects are automatically created.

To import address names for Kubernetes:

1. Go to *Policy & Objects* > *Object Configurations*.
2. Go to *Security Fabric* > *Fabric Connectors*.
3. In the content pane, right-click the Kubernetes Fabric connector, and select *Import*. The *Import SDN Connector* dialog displays.
4. Select the address names, and click *Import*. FortiManager imports the address names and converts them to dynamic firewall address objects that display on the *Firewall Objects* > *Addresses* pane.

Creating an IP address policy

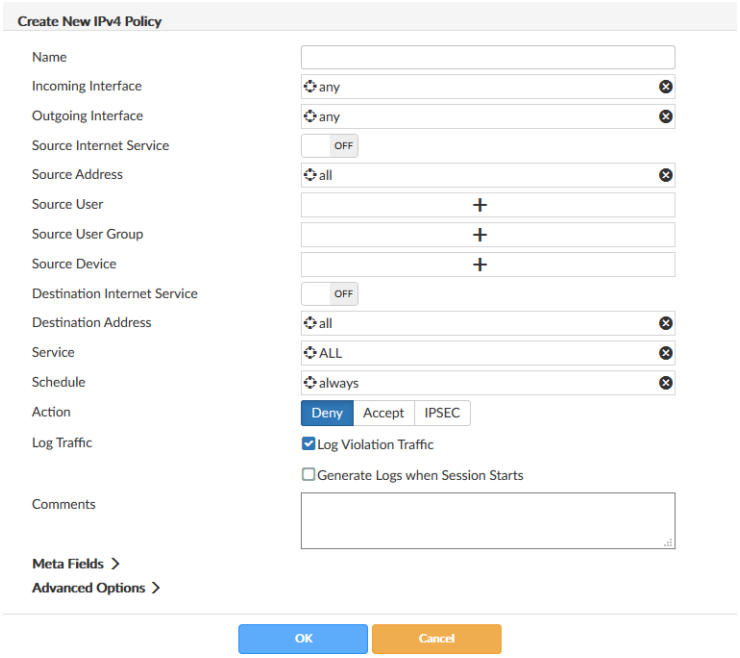
The section describes how to create new IPv4 and IPv6 policies.

You can create an IPv6 security policy for an IPv6 network and a transitional network. A transitional network is a network that is transitioning to IPv6 but must still have access to the Internet or must connect over an IPv4 network. IPv6 policies allow for this specific type of traffic to travel between the IPv6 and IPv4 networks.

On the *Policy & Objects* tab, from the *Tools* menu, select *Display Options*. In the *Policy* section, select the *IPv6 Policy* checkbox to display this option.

To create a new IPv4 or IPv6 policy:

1. Ensure that you are in the correct ADOM.
2. Go to *Policy & Objects* > *Policy Packages*.
3. In the tree menu for the policy package in which you will be creating the new policy, select *IPv4 Policy* or *IPv6 Policy*. If you are in the Global Database ADOM, select *IPv4 Header Policy*, *IPv4 Footer Policy*, *IPv6 Header Policy*, or *IPv6 Footer Policy*.
4. Click *Create New*, or, from the *Create New* menu, select *Insert Above* or *Insert Below*. By default, policies will be added to the bottom of the list, but above the implicit policy. The *Create New Policy* pane opens.



5. Complete the options.
6. Click *OK* to create the policy.
   You can enable or disable the policy in the right-click menu. When disabled, a disabled icon displays in the *Seq.#* column to the left of the number.

Installing a policy package

When installing a policy package, objects that the policy references are installed to the target device. Default or per-device mapping must exist or the installation fails.

Some objects that the policy does not directly reference are also installed to the target device, such as FSSO polling objects, address and profile groups, and CA certificates.

To install a policy package to a target device:

1. Ensure you are in the ADOM that contains the policy package.
2. Go to *Policy & Objects* > *Policy Packages*.
3. Select a policy package and from the *Install* menu or right-click menu select *Install Wizard*. The *Install Wizard* opens.
4. Follow the steps in the install wizard to install the policy package. You can install policy package and device settings or install the interface policy only.

Change log

Date	Change description
2022-04-11	Initial release.

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