Device Setup

> **Note:** This article explains how to add a device as part of the initial Setup Tasks for new/trial Kentik customers. For ongoing management of devices, or to add additional devices, access the **Network Devices** page from the Settings link on the main menu.

The setup of an initial device in the Kentik v4 portal is covered below in the following topics:

- About Device Setup
- Flow Export Method
- Direct Flow Export
- kproxy Export
- Setup in Multiple Sessions

Notes:

- For general information about setup tasks, see **Setup Overview**.
- For setup tasks related to onboarding cloud resources, see **Cloud Setup**.

Device setup is accessed from the Tasks List on the Welcome page.

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About Device Setup

Device setup is one setup task within the overall onboarding process that new Kentik customers (or trial users) go through to get up and running with Kentik (see **Setup Overview**). These tasks are listed at the left of the Welcome to Network Observability page. The process involves working through a wizard that gathers needed information. You will also need to configure the device itself to collect flow data and pass it to Kentik.

Starting Device Setup

To begin the device setup task:

1. In the Setup Tasks list, click **Connect a Router**.

2. In the main display area to the right of the list, click the **Set Up a Router** button, which opens the Connect a Router wizard.

Note: When working through the wizard the information you enter is saved only pages with a **Save** button. On all other pages, if you use the **Back** button to go upstream in the wizard the information you've entered on the page will not be saved.

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Flow Export Method

On the first page of the wizard, you'll be asked to choose how you'd like the router's flow data (NetFlow, sFlow, etc.) to get to Kentik. On this page you'll choose a method and click **the Next** button.

Two options are available. The subsequent steps in the device setup wizard vary depending on which export method you choose:

- **Direct flow export**: Send flow records directly to Kentik through the public Internet (see **Direct Flow Export**).
- **kproxy export**: Use Kentik's free proxy agent (kproxy), which can collects flow records and SNMP for multiple routers and encrypts the data locally before forwarding it to Kentik (see **kproxy Export**).

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Direct Flow Export

The direct flow export path of the device setup wizard is covered in the following topics:

- Device Setup Steps
- Device General Information
- Device Flow Setup
- Device SNMP Setup
- Device BGP Setup

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Device Setup Steps

If you choose direct flow export — or you are exporting via kproxy and you've completed the steps in **kproxy Export** — the next stage of the device setup process begins on the **Register your flow source** page. The page lists several steps representing categories of information that we'll gather to complete the device registration process:

- **General Info**: Your device's name, description, make, model, and location.
- **Flow**: Technical details such as the device's IP addresses and flow sampling rate.
- **SNMP**: Information needed to enable polling, including SNMP version, IP address, etc. SNMP polling enriches your Kentik-stored flow records with additional interface-specific data points that are queryable as dimensions (from information OIDs) and metrics (from counter OIDs).
- **BGP**: Information needed to enable correlation of the device's flow data with BGP routing data so you can apply customer-specific filters to query results, create routing-based tags, and run AS-oriented traffic analysis, including peering analytics.

Each of the above categories is represented in the device settings workflow as a set of pages that gather the required information and also provide you with the information you need to configure the device itself to send data to Kentik.

The Register Your Flow source page includes a progress list that shows what setup steps remain for this device.

Setup Progress List

As you complete each device onboarding task you'll be taken back to the **Register your flow source** page, where you'll see your progress. Completed tasks are indicated as follows:

- A checkmark will appear in the list to the left of the category.
- The category's link at the right of the list will change from **Get Started** to **Edit**.

When all tasks are completed, the **Create Device** button at the bottom of the page will become activated. Click it to save your settings and finalize registration of the device.

Note: If at any point in the following steps you have questions or need assistance, click the **Get Help** link at the upper right of any onboarding screen.

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Device General Information

The settings for device general information are accessed from the **Register your flow source** page:

1. Click the **Get Started** link in the **General Info** row.
2. On the **Name Your Device** page, enter a name and description for your device. Click **Next** when finished.
3. On the **Device make and model** page:
   - Click the card corresponding to the manufacturer of this device.
   - If the manufacturer offers more than one series or model that differs in configuration requirements, the **Model** popup will appear; choose the model of your device.
   - If there's no card corresponding to the manufacturer of your device, click the **Other** card.
   Note: Once you've specified your make and model the page will automatically advance to the next step.
4. On the **Set device location** page you'll tell us the location (street address) where the device is physically housed (e.g. a data center). We'll use this information to create a "site," which will enable location-based queries (see **About Sites**). Click **Finish** when you're done, at which point you'll be returned to the **Register your flow source** page.

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Device Flow Setup

Once you've entered **Device General Information** and returned to the **Register your flow source** page you can move on to flow settings:

1. Click the **Get Started** link in the **Flow** row.

2. On the **Sending IP addresses** page, enter a comma-separated list of one or more IP addresses from which the device will export flow data to Kentik. Click **Next** when finished.

3. On the **Flow Sample Rate** page, set the rate at which the device is (or will be) configured to generate flow records, which is expressed as a ratio of collected flows to all flows (i.e. 1:1000 means one flow record per thousand flows). The accuracy of all traffic volume calculations depends on this information. Click **Next** when finished.

4. On the **Configure Flow on Device** page, we provide you with configuration snippets, based on the make and model of the device, that you'll need to configure the device itself to send flow data to Kentik. When you've finished configuring the device, click **Finish**, at which point you'll be returned to the **Register your flow source** page.

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Device SNMP Setup

Once you've completed **Device Flow Setup** and returned to the **Register your flow source** page you can move on to SNMP settings:

1. Click the **Get Started** link in the **SNMP** row.

2. On the **SNMP Settings** page, activate SNMP polling for this device and choose the SNMP version. SNMP v3 is more secure than SNMP v2, and is recommended for customers with concerns about using SNMP v2 over the public Internet. Click **Next** when finished.

3. On the **SNMP Details** page, click **Next** after making the following settings (see **Device SNMP Settings**):
   - *SNMP v2*: IP Address and Community.
   - *SNMP v3*: IP Address and User Name (both required), as well as (optionally) Authentication and Privacy (see **About SNMP V3**).

4. On the **Configure SNMP on Device** page, we provide you with configuration snippets, based on the make and model of the device, that you'll need to configure the device itself to allow SNMP polling from Kentik. When you've finished configuring the device, click **Finish**, at which point you'll be returned to the **Register your flow source** page.

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Device BGP Setup

Once you've completed **Device SNMP Setup** and returned to the **Register your flow source** page you can move on to BGP settings:

1. Click the **Get Started** link in the **BGP** row.

2. On the **BGP Settings** page, activate BGP for this device and specify the IP type (e.g. IPv4) of the device's peering address. Click **Next** when finished.

3. On the **BGP Details** page, set the **Device BGP Settings**, then click **Next**.

4. On the **Configure BGP on Device** page, we provide you with configuration snippets, based on the make and model of the device, that you'll need to configure the device for BGP peering with Kentik. When you've finished configuring the device, click **Finish**.

5. When you return to the **Register your flow source** page, you'll now see that for each item in the setup list (see **About Device Setup**) there's a checkmark at the left and the link at the right says **Edit**. The **Create Device** button at the bottom of the page will also be activated. Click it to save your settings and finalize registration of the device.

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kproxy Export

Exporting device flow to Kentik via kproxy involves the following additional steps:

- Deploy kproxy Instance
- Set Up kproxy

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Deploy kproxy Instance

If you choose kproxy export the next stage of the device setup process begins on the **Deploy a kproxy instance** page. Fill in the following fields for the kproxy instance:

- **kproxy Instance Name**: Your name for the instance.
- **Description**: Your description of the instance.
- **Private IP**: The IP of the router that the agent will see the flow being received from.
- **Site**: A drop-down from which you can choose the site to which this kproxy is assigned.

- **Create a New Site**: If a site hasn't yet been defined for the location where the agent host is located, click the button to create a new site (see **Configure Site Fields**).

When the fields are filled, click the **Next** button to go to the next step in the wizard.

Set Up kproxy

The next step in the kproxy wizard path is the **Set up kproxy** page. This page is equivalent to the **Adding a kproxy Agent** dialog on the v4 portal's Settings » kproxy agents page. For information on how to complete this step, see **Add kproxy Agent**. When setup of your kproxy agent is complete you'll be taken to the **Register your flow source** page (see **Device Setup Steps**), at which point the setup steps for devices become the same whether the device exports flow directly or via kproxy.

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Setup in Multiple Sessions

The onboarding of a device with Kentik need not be completed in a single session. If you log out before your organization's device settings are complete, your destination when you log in again will depend on where the process was left:

- **Data source not started**: If you haven't yet started to register a data source, you'll be taken to the initial post-login page for new accounts. At this point you'll be in the new customer Setup workflow, which is covered in **Setup Overview**.

- **Data source incomplete**: If your first data source is a device and you started (but didn't finish) onboarding you'll be taken directly to the **Register your flow source** page for the partially onboarded device, in the Setup workflow, so that you can complete the remaining settings (see **Device Setup Steps**).

- **Data source complete**: If you've completed the registration and settings for at least one data source (device or cloud) then upon subsequent login you'll be taken to **Network Explorer**. If you've initiated registration for multiple data sources, and the settings for any devices are incomplete, then you'll see a callout (orange rectangle) at the top of the page notifying you of that fact. For next steps, see **Device Status Overview**.

Note: Regardless of which of the above states apply when you return to the portal, the main menu will include a **Setup Tasks** section at the lower right until all setup tasks for your organization are complete. Click the **See all** link in that section to go to the Welcome to Network Observability page, where you'll see your organization's remaining **Setup Tasks**.