How To Monitor Kubernetes With Nagios XI And NCPA

Purpose

This document describes how to monitor Kubernetes clusters with Nagios XI 2024R2 using NCPA (the Nagios Cross Platform Agent) and the Kubernetes Wizard.

Important Note: this wizard is one of Nagios XI's Premium features, so requires active support and maintenance benefits to function. For questions about renewing your benefits if they have lapsed, please email sales@nagios.com so we can assist you further.

Installing NCPA

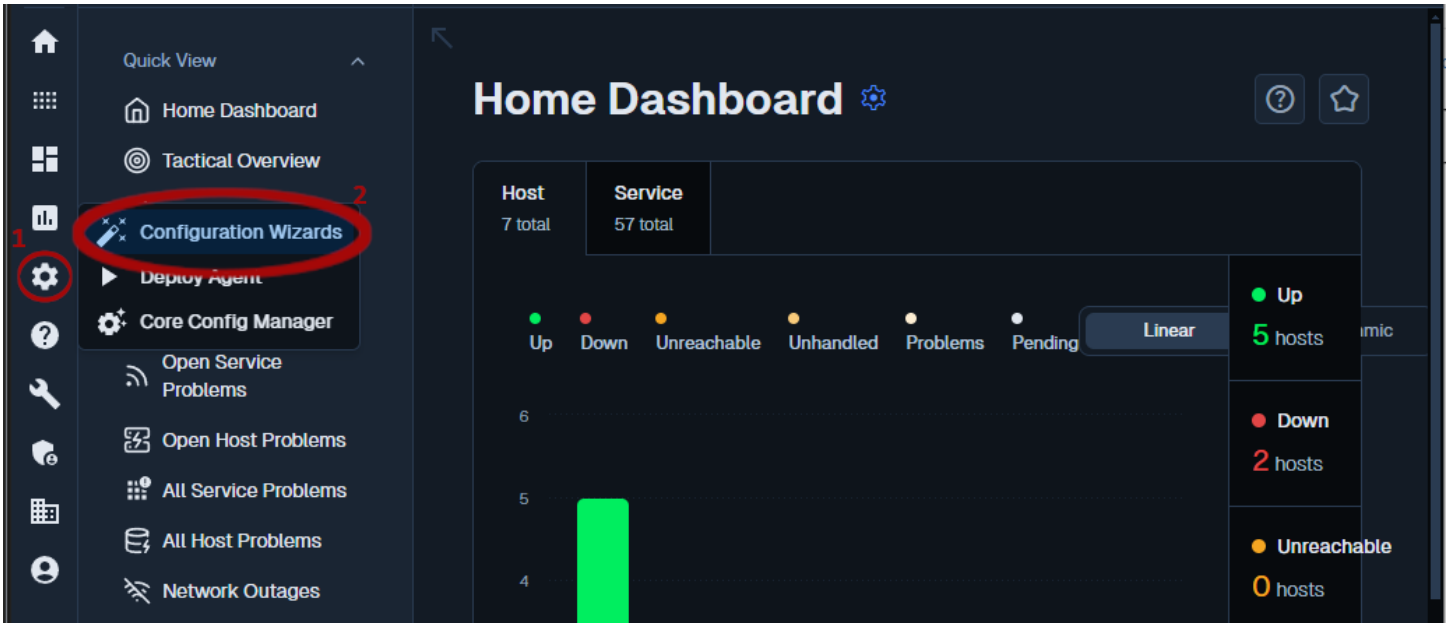
In order to use the Kubernetes Wizard, you'll need to first install NCPA on the target cluster's nodes. Instructions for installing NCPA can be found in the Installing NCPA and Automatic Agent Deployment documentation.

Configuring Kubernetes Access

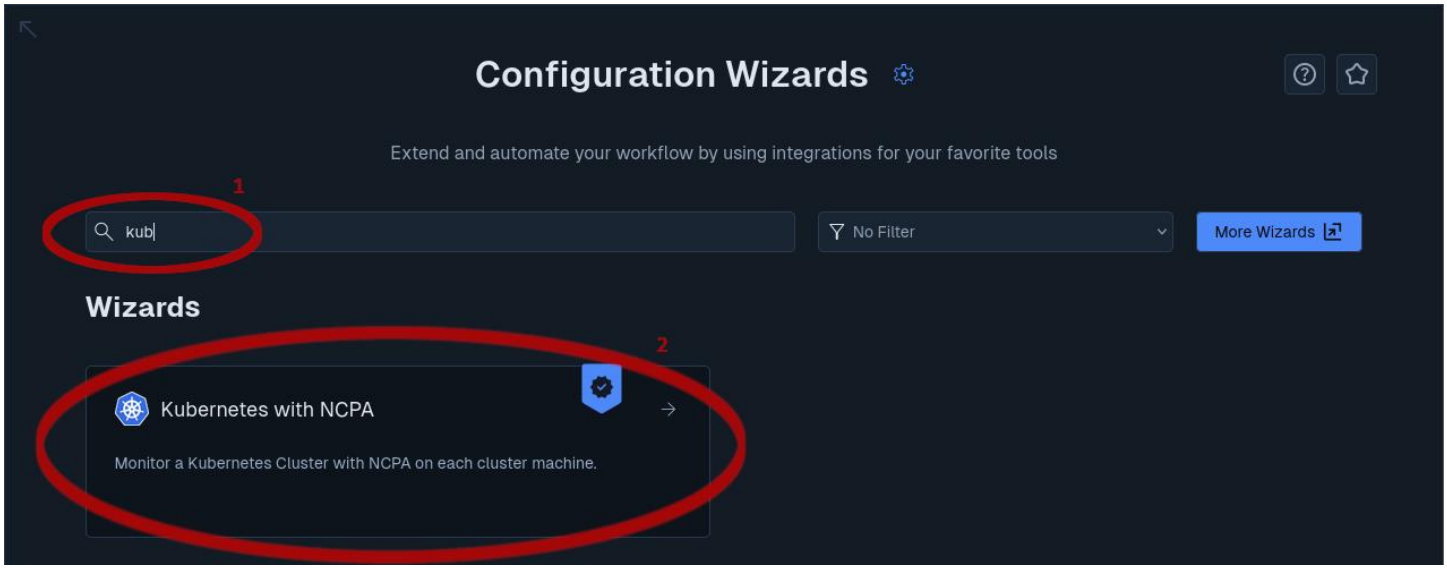
The next step will be to configure NCPA access to the Control Plane/Master node. Please see How to Set Up Kubernetes Monitoring with NCPA. Once this is completed, proceed to the next steps below.

Finding the Kubernetes NCPA Wizard

To access the Kubernetes Wizard, navigate to **Configure** > **Configuration Wizards**.



On the “Configuration Wizards” page, select the **Kubernetes NCPA** wizard using the “Nagios Products” filter or start typing “kubernetes” in the search field to quickly find the wizard.

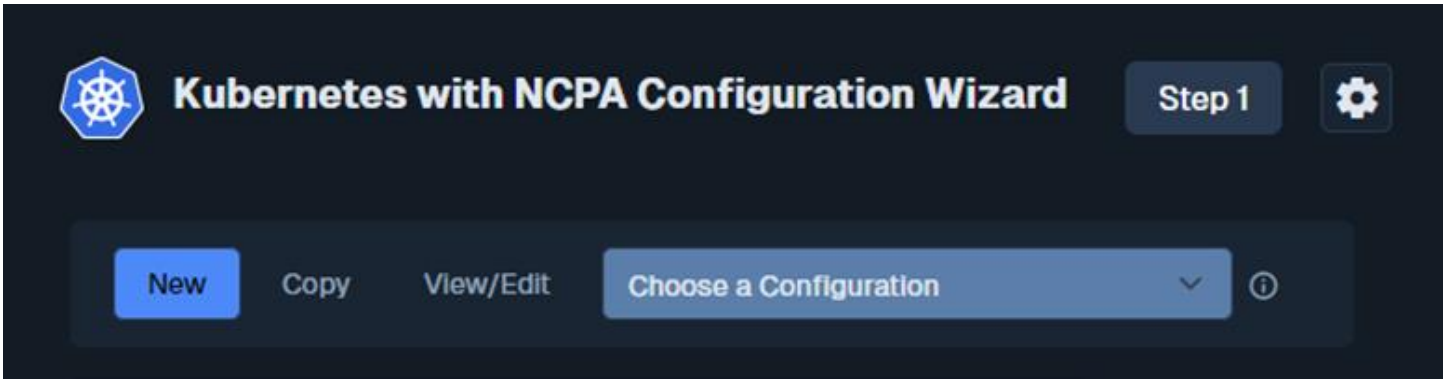


Using the Kubernetes Wizard – Step 1

Section 1– Control Bar

The control bar at the top of the wizard allows reviewing (**View**), editing (**Edit**) and copying (**Copy**) of existing Kubernetes configurations previously created by this wizard. By default, the wizard will have the **New** switch selected. If there are existing Kubernetes configurations, the **View** and **Edit** switches will be selectable.

To view or edit a configuration, click on **View/Edit** and then **Choose a Configuration**. To make a copy of an existing Kubernetes configuration, click on **Copy** and then **Choose a Configuration**.

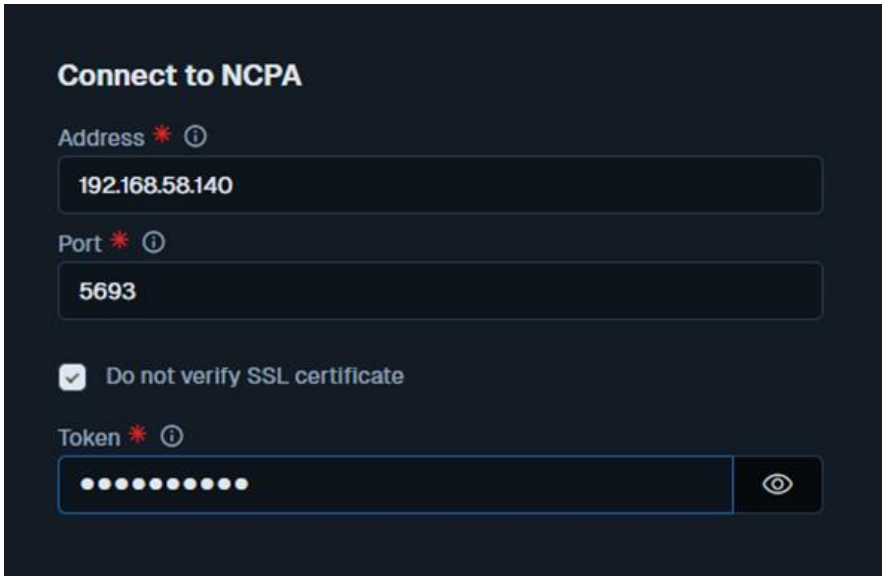


Section 2 - Connect to NCPA

In the **Address** field, type the IP address or hostname of the host to monitor.

Specify the **Port** number, if not the default of **5693**.

Type the **Token** that was configured for the NCPA agent.

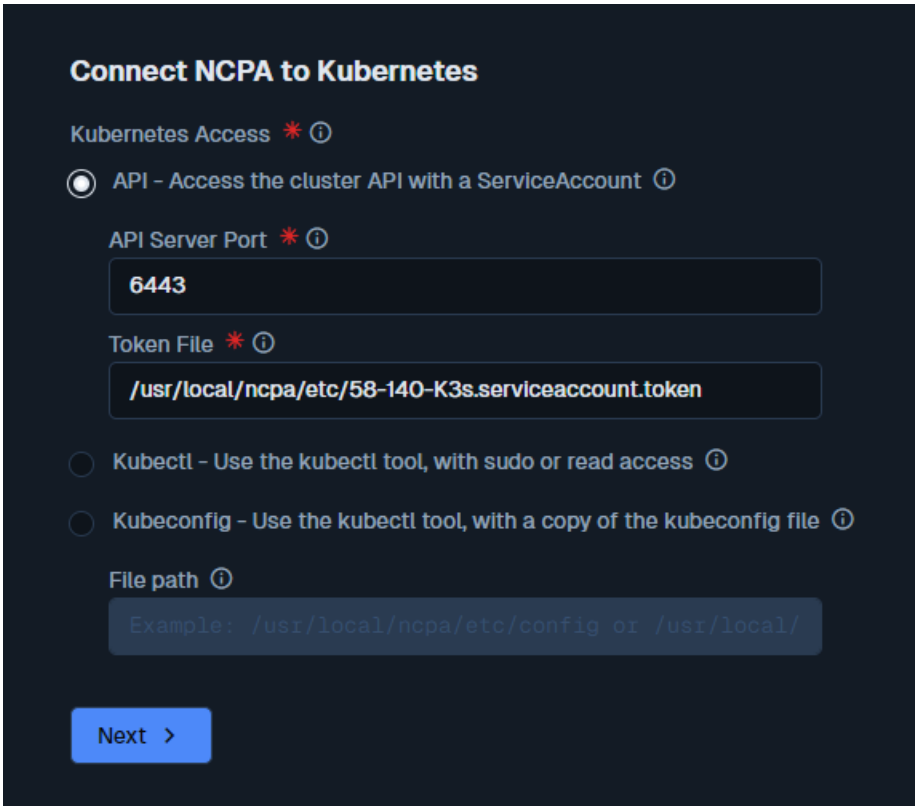


Section 3 - Connect NCPA to Kubernetes

Choose the **Kubernetes Access** method previously configured for the Kubernetes Cluster.

Method 1: API

1. Choose **API** to use the **ServiceAccount** setup on the Kubernetes Control Plane/Master Node.
2. Enter the **Port** number of the API Server (if not 6443)
3. Enter the file path of the ServiceAccount **Token File**, located on the Kubernetes Control Plane/Master Node and readable by the **nagios** user.
4. Click **Next**



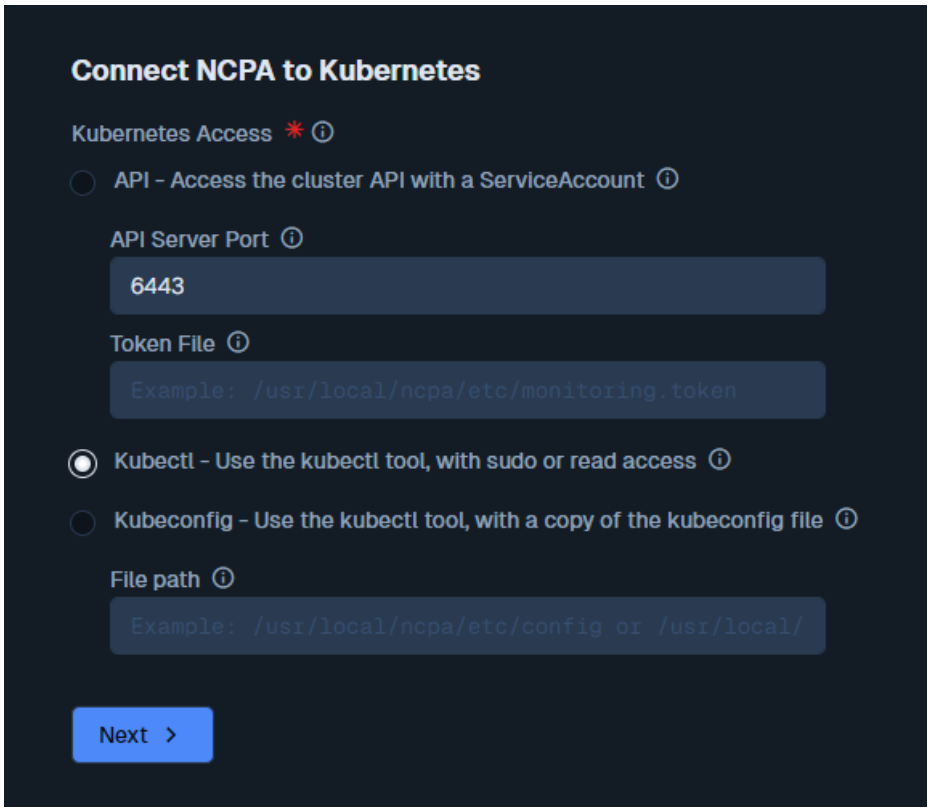
Methods 2a & 2b: Kubectl with Sudo or Read Access

All the setup work is on the Kubernetes Control Plane/Master Node, so there are no extra requirements on the wizard side.

Kubectl Wizard Setup

1. Choose **Kubectl** to have NCPA run the plugin with kubectl using the **2a** or **2b** method as configured on the Kubernetes Control Plane/Master Node.

2. Click **Next**.



Method 3: Kubeconfig

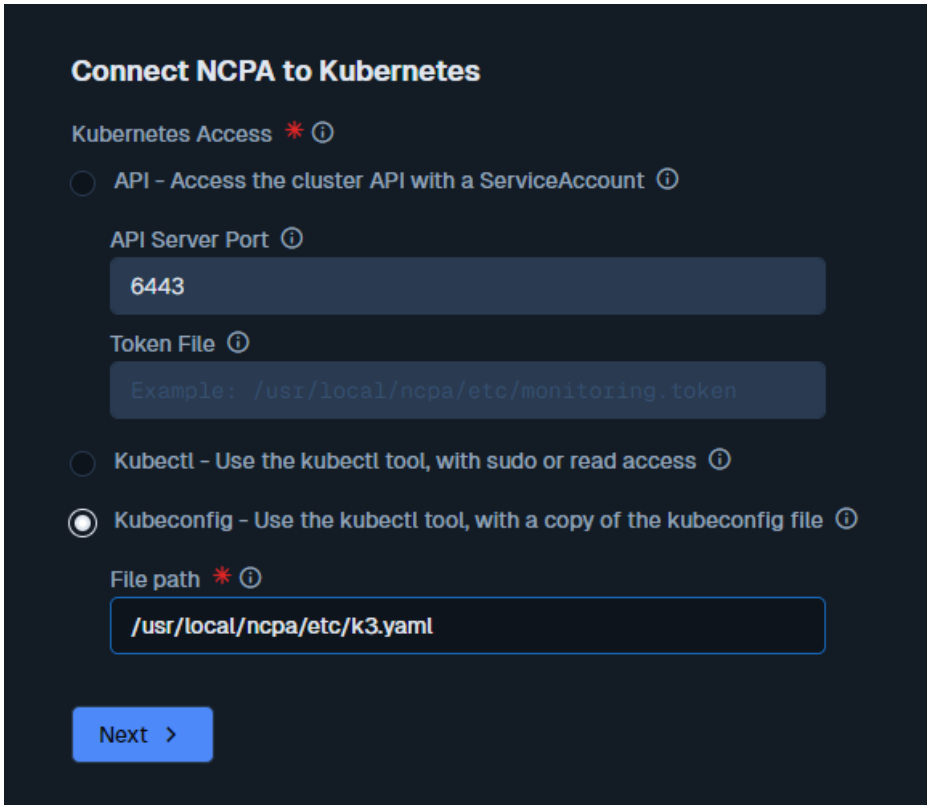
Kubeconfig Requirements

Copy the `kubeconfig.yaml` file to a location available to NCPA.

Kubeconfig Wizard Setup

1. This method also uses kubectl but requires the **File path** to a copy of the kubeconfig file, on the Control Plane/Master Node where the location is accessible to NCPA, and the file must be readable by NCPA.

2. Click **Next**.



Finishing Step 1

When you click **Next** on **Step 1**, the **NCPA Token** will be validated. If the token is wrong or the machine cannot be contacted, the wizard will return to **Step 1**, until the token is successfully verified.

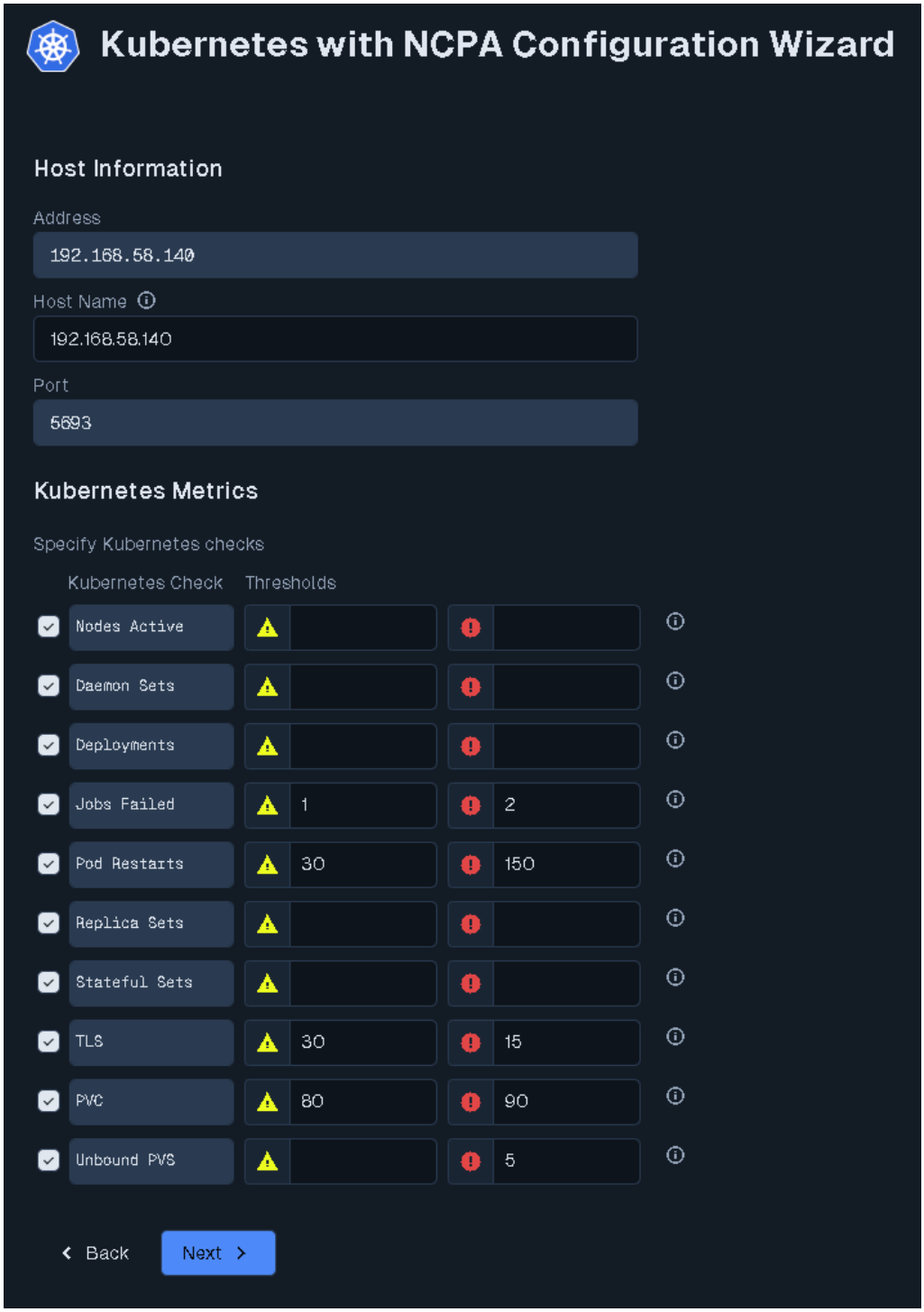
Using the Kubernetes Wizard: Step 2

In **Step 2**, you will configure the metrics to be monitored.

Make sure a valid and useful **Host Name** has been entered.

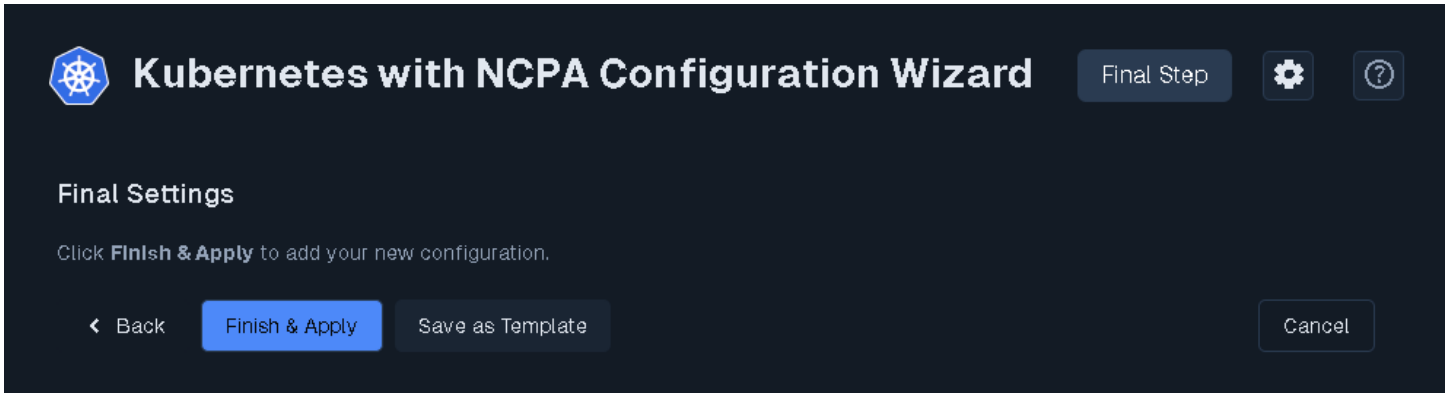
Select/deselect the metrics for monitoring. Adjust the warning and critical thresholds for each metric to suit the environment.

Once the appropriate metrics have been configured, click **Next**.

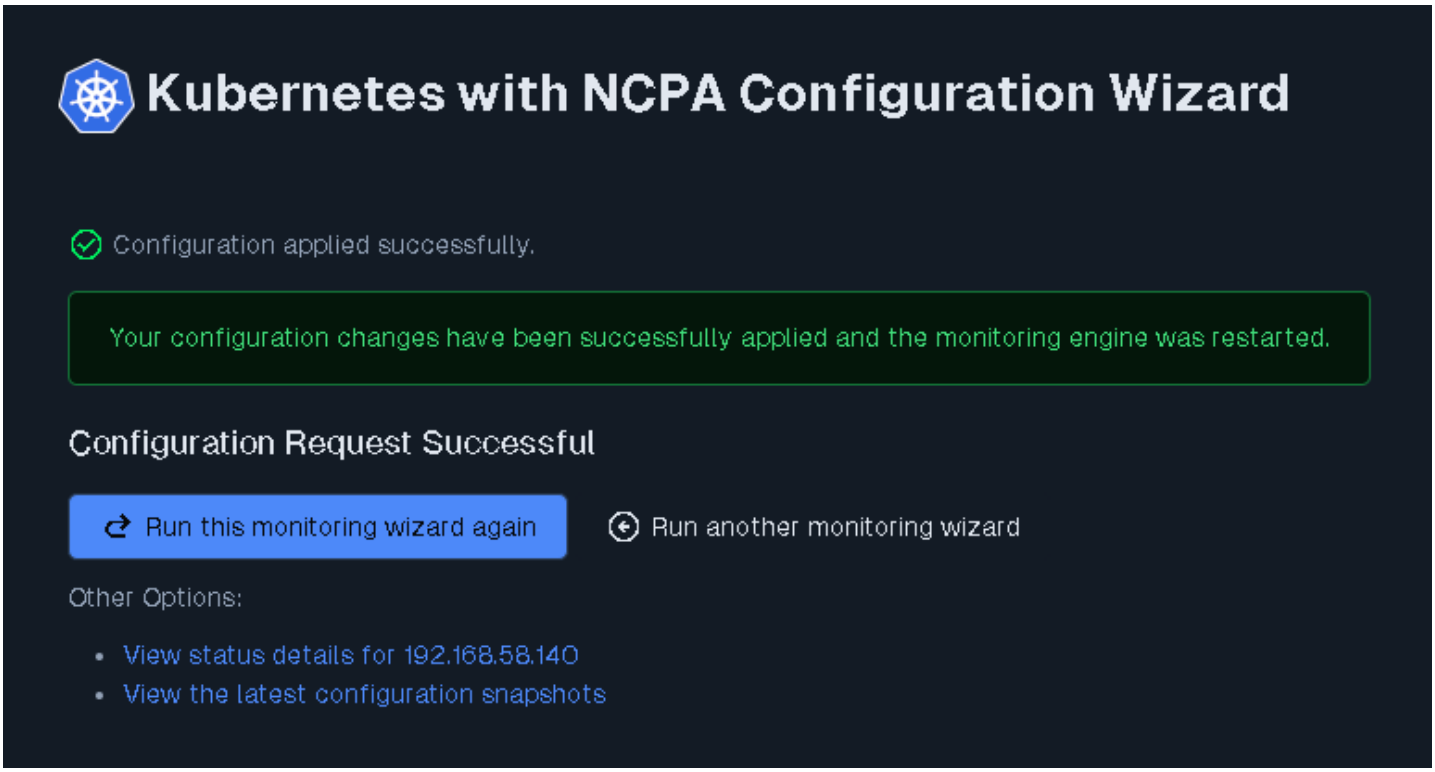


Using the Kubernetes Wizard: Steps 3-5

In **Step 3** make desired changes (if necessary) and click either the **Finish with Defaults** or the **Next** button. If desired, go on to **Step 4** and **Step 5** and on the **Final Step** click the **Finish & Apply** button.



Both **Finish with Defaults** and **Finish & Apply** will display a success or failure page.



Once the configuration has been applied, click the **View status details for *<NCPA HOST>*** link to see the new host and service(s) that were created.

192.168.58.141-K8s	Daemon Sets	Ok	2h 37m 55s	1/5	2025-06-24 15:59:29	OK: Daemonset kube-system/svclb-traefik-74fc239d 1/1 ready
	Deployments	Ok	6h 43m 47s	1/5	2025-06-24 16:00:31	OK: 4 deployments are available
	Jobs Failed	Ok	6h 44m 50s	1/5	2025-06-24 16:00:03	OK: 2 checked. 0 failed jobs is below threshold
	Nodes Active	Ok	6h 43m 15s	1/5	2025-06-24 16:00:56	OK: 1 nodes are ready
	PVC	Warning	1h 7m 44s	5/5	2025-06-24 16:01:05	WARNING: 0 defined pvc
	Pod Restarts	Ok	1h 10m 32s	1/5	2025-06-24 15:59:22	OK: 5 pods ready, 2 pods succeeded, 0 pods not ready
	Replica Sets	Ok	1h 11m 15s	1/5	2025-06-24 16:03:43	OK: 4 replicasets are ready
	Stateful Sets	Critical	10h 40m 18s	5/5	2025-06-24 15:59:44	No statefulsets found

Finishing Up

This completes the documentation on How to Monitor Kubernetes with Nagios XI and NCPA. If you have additional questions or other support-related questions, please visit us at our Nagios Support Forum, Nagios Knowledge Base, or Nagios Library:

Visit Nagios Support Forum Visit Nagios Knowledge Base Visit Nagios Library