



Purpose

This document describes how to use Auto-Discovery in Nagios XI to locate hosts and devices that are not already being monitored by Nagios XI.

Target Audience

This document is intended for use by Nagios Administrators who would like to understand how Auto-Discovery works in Nagios XI.

Overview

The Auto-Discovery feature in Nagios XI comprises of two components:

- Auto-Discovery Jobs
 - This performs the discovery of hosts and devices in your network environment
 - A network scan is performed using `ping` and `nmap`
- Auto-Discovery Configuration Wizard
 - Using the results of an Auto-Discovery job you can start monitoring these hosts and devices

Auto-Discovery Jobs

The management of Auto-Discovery jobs is located by navigating to **Configure > Configuration Tools > Auto-Discovery**.

The screenshot shows the Nagios XI web interface. The top navigation bar includes 'Home', 'Views', 'Dashboards', 'Reports', 'Configure' (circled in blue), 'Tools', 'Help', and 'Admin'. A search bar and user information 'nagiosadmin' are also visible. The left sidebar menu shows 'Configure' expanded, with 'Configuration Tools' selected, and 'Auto-Discovery' (circled in blue) highlighted. The main content area is titled 'Auto-Discovery Jobs' and contains a '+ New Auto-Discovery Job' button and a 'Refresh job list' button. Below these is a table with columns: Scan Target, Exclusions, Schedule, Last Run, Devices Found, Created By, Status, and Actions. The table is empty, with a message: 'There are no auto-discovery jobs. Add one now.'

Create A New Job



To create a new job click the **+ New Auto-Discovery Job** button.

The options required when creating a job are self explanatory. The screenshot to the right shows the additional options available after clicking the **Show Advanced Options +** link.

This example shows a class C subnet being scanned with an excluded IP. It has been scheduled to run daily and the System DNS option has been selected to resolve the addresses to DNS records.

Click the **Submit** button to create the job.

The new job will appear on the Auto-Discovery page when it reloads.

When a job is running, or scheduled and hasn't run yet, the **Status** column will show a  icon. In the **Actions** column you can click the  icon to delete the job.

New Auto-Discovery Job

Use this form to configure an auto-discovery job.

Scan Target:
 Enter an network address and netmask to define the IP ranges to scan.

Exclude IPs:
 An optional comma-separated list of IP addresses and/or network addresses to exclude from the scan.
Note: The excluded addresses may be pinged, but they will not be scanned for open/available services via nmap.

Schedule: **Frequency:**
Time: :
 Specify the schedule you would like this job to be run.

OS Detection:
 Attempt to detect the operating system of each host.
Note: OS detection may cause the scan to take longer to complete and may not be 100% accurate.



Scan Delay: ms
 Adjust delay between probes to a given host.
 If set, this option causes Nmap to wait at least the given amount of time between each probe it sends to a given host.
 This is particularly useful in the case of rate limiting. milliseconds.

System DNS:
 Use system DNS.

Custom Ports:
 Specify Custom ports. Ex: 22; 1-65535; U:53,111,137,T:21-25,80,139,8080,S:9

Auto-Discovery Jobs

Auto-discovery job added.

| Scan Target | Exclusions | Schedule | Last Run | Devices Found | Created By | Status | Actions |
|--------------|------------|-------------------|----------|---------------|-------------|---|---|
| 10.25.5.0/24 | 10.25.5.1 | Daily 10:00 AM | | N/A | nagiosadmin |  |  |





When the job has finished running it will show how many new devices were found.

| Scan Target | Exclusions | Schedule | Last Run | Devices Found | Created By | Status | Actions |
|--------------|------------|-------------------|---------------------|--------------------------|-------------|----------|---|
| 10.25.5.0/24 | 10.25.5.1 | Daily 10:00 AM | 2017-08-17 10:00:00 | 12 New / 13 Total | nagiosadmin | Finished |     |

In the screenshot above, if you click the **12 New** link you will be taken to the Auto-Discovery configuration wizard which is explained in the [Configuration Wizard](#) section of this document.

Job Actions

On the Auto-Discovery Jobs page, the **Action** column provides the following functionality:

-  Edit Job - Adjust the settings for the job
-  Re-Run Job - Force the job to run now
-  View Job - View detailed information about the scan results and deploy agent
-  Delete Job - Discard the job and it's history

View Job

The View Job icon allows you to view detailed information about the network scan that was performed and deploy an agent to selected hosts.

You can view all the hosts, or just the new hosts discovered.



You can show the services that were discovered.

You can deploy an agent to selected hosts. See [Automatic Agent Deployment](#) for more information.

Scan Results



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| Scan Summary | |
|--------------------|-----------------------------|
| Scan Date: | 2017-08-17 10:00:00 |
| Scan Address: | 10.25.5.0/24 |
| Excludes: | 10.25.5.1 |
| Initiated By: | nagiosadmin |
| Total Hosts Found: | 13 Show all |
| New Hosts Found: | 12 |

| Processing Options | |
|-----------------------------|---|
| Export Data As: |  CSV |
| Configure Basic Monitoring: |  New hosts |

Discovered Items

The hosts below were discovered during the auto-discovery scan. Hosts identified as Linux servers with SSH available and no agent already deployed. [Show discovered services](#)

| <input type="checkbox"/> | Address | Host Name | Type | Device/Operating System [Accuracy]  | MAC Vendor | Agent Deployed  | Status |
|-------------------------------------|-----------|-----------|--------------|--|------------|--|--------|
| <input checked="" type="checkbox"/> | 10.25.5.1 | 10.25.5.1 | Linux Server | Linux 3.2 - 4.9 [100%] | VMware | No | New |
| <input checked="" type="checkbox"/> | 10.25.5.2 | 10.25.5.2 | Linux Server | Linux 2.6.32 - 3.10 [100%] | VMware | No | New |
| <input checked="" type="checkbox"/> | 10.25.5.3 | 10.25.5.3 | Linux Server | Linux 2.6.32 [96%] | VMware | No | New |
| <input checked="" type="checkbox"/> | 10.25.5.4 | 10.25.5.4 | Linux Server | Linux 3.10 - 4.11 [100%] | VMware | No | New |
| <input checked="" type="checkbox"/> | 10.25.5.5 | 10.25.5.5 | Linux Server | Linux 3.10 - 4.11 [100%] | VMware | No | New |

[Deploy Agents to Selected Hosts](#)

This job can be exported as a CSV.

Configuration Wizard

The Auto-Discovery configuration wizard is what turns the Auto-Discovery job results into monitored devices. When on the Auto-Discovery page, click the **New** link in the **Devices Found** column to start the Wizard. You can also run the wizard by navigating to **Configure > Configuration Wizards > Auto-Discovery** wizard.

Configuration Wizard: Auto-Discovery - Step 1

Auto-Discovery Job

Job:

Select the auto-discovery job you wish to use for choosing new hosts and services to monitor.

If you wish, you can also [launch a new discovery job](#).

Show:

Choose whether you'd like to see results from all hosts that were found during the scan, or only new hosts that aren't currently being monitored.

Default Services:

Select the types of services that you would like to be selected for monitoring by default. You can override individual services on the next page.

Host Addresses:

Select the type of addresses that you would prefer to use for newly configured hosts.

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The job will be automatically selected. The available options are clearly explained in the screenshot above, this example will be showing **New Hosts** and the **Host Addresses** option is set to **DNS Names**.

Click **Next** to proceed to Step 2.

Step 2 of the wizard allows you to select exactly what host and service objects will be created. The following screenshot is of the first host in the list.

Configuration Wizard: Auto-Discovery - Step 2

Scan Results

The hosts and services below were discovered during the auto-discovery scan. Select the hosts and services you'd like to monitor.

| <input type="checkbox"/> | Address | Type | OS | Status | Host Name | Services | | | | |
|-------------------------------------|--------------------------|--------------|---------------------|--------|--|-------------------------------------|------------------------------------|---------|------|----------|
| | | | | | | <input type="checkbox"/> | Service Name | Service | Port | Protocol |
| <input checked="" type="checkbox"/> | 10.25.5.2 (10.25.5.2) | Linux Server | Linux 2.6.32 - 3.10 | New | <input type="text" value="xitest.box293.local"/> | <input checked="" type="checkbox"/> | <input type="text" value="SSH"/> | ssh | 22 | TCP |
| | | | | | | <input checked="" type="checkbox"/> | <input type="text" value="HTTP"/> | http | 80 | TCP |
| | | | | | | <input checked="" type="checkbox"/> | <input type="text" value="HTTPS"/> | https | 443 | TCP |
| | | | | | | <input checked="" type="checkbox"/> | <input type="text" value="NRPE"/> | nrpe | 5666 | TCP |

You can change the name of the host and also the services. The services created are basic port monitoring services, more specific monitoring like Load and Disk Space will require you to run a configuration wizard that provides that functionality.

You can select or deselect a host by using the check box next to the host address in the left column. Deselecting a host means that none of the services selected to the right will be monitored.

The check box in the upper left corner will select ALL hosts in the wizard. The same applies to the Services check box.

After making your selections click **Next** and then complete the wizard by choosing the required options in Step 3 - Step 5.

To finish up, click on **Finish** in the final step of the wizard. This will create the new hosts and services and begin monitoring.

| Host | Service | Status | Duration | Attempt | Last Check | Status Information |
|---------------------------|---------|--------|------------|---------|---------------------|---|
| xidr-c6x-x64.box293.local | HTTP | Ok | 1h 10m 36s | 1/5 | 2017-08-17 16:20:10 | HTTP OK: HTTP/1.1 200 OK - 3271 bytes in 0.013 second response time |
| | HTTPS | Ok | 1h 9m 36s | 1/5 | 2017-08-17 16:16:10 | HTTP OK: HTTP/1.1 200 OK - 3271 bytes in 0.018 second response time |
| | Ping | Ok | 1h 8m 35s | 1/5 | 2017-08-17 16:17:07 | OK - xidr-c6x-x64.box293.local: rta 0.090ms, lost 0% |
| | SSH | Ok | 1h 11m 11s | 1/5 | 2017-08-17 16:19:30 | SSH OK - OpenSSH_5.3 (protocol 2.0) |
| xitest.box293.local | HTTP | Ok | 1h 11m 33s | 1/5 | 2017-08-17 16:19:13 | HTTP OK: HTTP/1.1 302 Found - 513 bytes in 0.004 second response time |
| | HTTPS | Ok | 1h 10m 25s | 1/5 | 2017-08-17 16:20:21 | HTTP OK: HTTP/1.1 200 OK - 3220 bytes in 0.019 second response time |
| | NRPE | Ok | 1h 9m 29s | 1/5 | 2017-08-17 16:16:15 | TCP OK - 0.003 second response time on xitest.box293.local port 5666 |
| | Ping | Ok | 1h 8m 28s | 1/5 | 2017-08-17 16:17:19 | OK - xitest.box293.local: rta 0.188ms, lost 0% |
| | SSH | Ok | 1h 11m 21s | 1/5 | 2017-08-17 16:19:22 | SSH OK - OpenSSH_5.3 (protocol 2.0) |

Newly Discovered Hosts

In the future, re-running the Auto-Discovery job (manually or scheduled) will detect new hosts that are not already being monitored by Nagios XI. Here is that job again after two hosts were brought online:

| Scan Target | Exclusions | Schedule | Last Run | Devices Found | Created By | Status | Actions |
|--------------|------------|-------------------|---------------------|-------------------------|-------------|----------|---------|
| 10.25.5.0/24 | 10.25.5.1 | Daily 10:00 AM | 2017-08-17 16:16:52 | 2 New / 15 Total | nagiosadmin | Finished | |

You can see now there are 15 in total with **2 New** devices being detected. Clicking the 2 New will allow you to start monitoring these new devices.

Finishing Up

This completes the documentation on using Auto-Discovery in Nagios XI.

If you have additional questions or other support related questions, please visit us at our Nagios Support Forums:

<https://support.nagios.com/forum>

The Nagios Support Knowledgebase is also a great support resource:

<https://support.nagios.com/kb>