

What are the recommended hardware specifications for the Nx Mediaserver application?

The Nx Witness Mediaserver application can be installed on most modern computers with a 64-bit architecture. That being said, Nx Witness, and all software in general, is only as stable as the hardware it is installed upon.

Although the Nx Mediaserver application is an extremely lightweight application that uses a minimum amount of hardware resources, we do recommend using the following hardware specifications for most situations.

Prerequisites

In order to use the Nx Server application, the system needs to have at least the following prerequisites:

- [A supported 64-bit Operating System](#)
- An Intel or AMD [CPU](#)

Note: The recommendations below are based on the assumption that the computer being used is dedicated to the Nx Server application with the default settings and is not used to run additional applications concurrently, as this may impact the performance and stability of your System.

Hardware Recommendations

We recommend using the following specifications and prerequisites mentioned to have good performance for the Nx Server application:

For Servers with less than 50 connected devices (HD IP Cameras/IO/Encoders/HD Streams):

Type	Requirement
CPU	Intel Celeron 8th gen or AMD Athlon Gold Quad-Core or better
RAM	4 GB DDR3 1600 MHz or better
Network Interface	2 x 100 Mbit or better
GPU	N/A (only applicable when a GUI is required)
OS Drive	Dedicated SSD or NVMe disk for the OS, 128 GB or larger
Storage Drive(s)	Please make sure that the read/write capacity of the storage drives is sufficient to handle the load created by the cameras.*

For Servers with more than 50 connected devices and max of 128 devices (HD IP Cameras/IO/Encoders/HD Streams):

Type	Requirement
CPU	Intel i3 8th gen or AMD Ryzen 3 3000 Quad-Core or better
RAM	8 GB DDR3 1600 MHz or better

Network Interface	2 x 1 Gbit or better
GPU	N/A (only applicable when a GUI is required)
OS Drive	Dedicated SSD or NVMe disk for the OS, 128 GB or larger
Storage Drives(s)	Please make sure that the read/write capacity of the storage drives is sufficient to handle the load created by the cameras.*

When considering using an **ARM-based device**, the hardware should comply with the requirements described in [this](#) article.

* = you can use the [Nx System calculator](#) to estimate the number of servers and storage required for your system.

NOTE: Since it's extremely difficult to offer hardware recommendations that will meet the requirements for all systems, we highly recommended large system deployments to refer to the [Large Systems Deployment](#) support article or consult your reseller to support you with the design of your system.

Why no minimum hardware requirements?

Although Nx Server is a very lightweight application that can run on an ARM-based device like the [Raspberry Pi](#), there are too many variables and use cases to determine viable minimum requirements.

For example, a System with one camera, no saved layouts, few rules, and a single user on lightweight hardware will work just fine. A System with 100 cameras per server, dozens or hundreds of layouts, numerous rules, and hundreds of concurrently connected users would require much more substantial hardware based on our recommendations below.

For large system deployments, we suggest users refer to the [Large Systems Deployments](#) support article or consult your reseller to support you with the design of your system.

What about ARM-based devices?

Network Optix also has an ARM-based Nx Server application for Linux powered devices like the [Nvidia Jetson Nano](#), [Raspberry Pi](#), and other [single board computers](#). However, users considering ARM-based devices should be aware that using such devices for production systems requires specific knowledge and experience.

Check out the [Building Arm-based NVRs support article](#) to learn more about building an ARM-based device capable of supporting the Nx Server application.

In general, if you are looking for low-powered affordable devices, the use of a [bare-bone device](#) with 64-bit architecture is recommended as it is easier to set up, more flexible, and more reliable to use in a production environment.

For guidance on how to install Nx Witness on an ARM-based Single Board Computer, suitable for prototyping and experimental use, please refer to [this](#) support article. To create your own ARM-based Linux NVR, please refer to [this](#) support article. More on our ARM Support Policy can be read [here](#).