



Witness VMS



- HUNDREDS**
OF SUPPORTED IP
CAMERA BRANDS
- THOUSANDS**
OF CUSTOM SYSTEMS
DEPLOYED
- MILLIONS**
OF VIDEO STREAMS
MANAGED EVERY DAY
- BILLIONS**
OF EVENTS PROCESSED
EVERY HOUR



Video Management. **Made Simple.**



Apps for Every Operating System. **Cloud Enabled.**
Nx Witness supports all major operating systems with the ability to link any system to Nx Cloud for fast, reliable remote access.

Automated. Intuitive. **Built for Users.**
Installs in seconds, configures in minutes.
Instantly usable for novices, operators, integrators, or developers.

Auto-Discover Devices from Hundreds of Manufacturers.
Discover and manage thousands of compatible video, audio and I/O devices.
Set up a new system or replace any existing VMS in minutes.

Open for Developers. **Integrate Anything.**
With an open Restful API, a suite of SDK's, and integrator-friendly tools like a built-in API generator Nx Witness users can quickly integrate any 3rd party device or system.

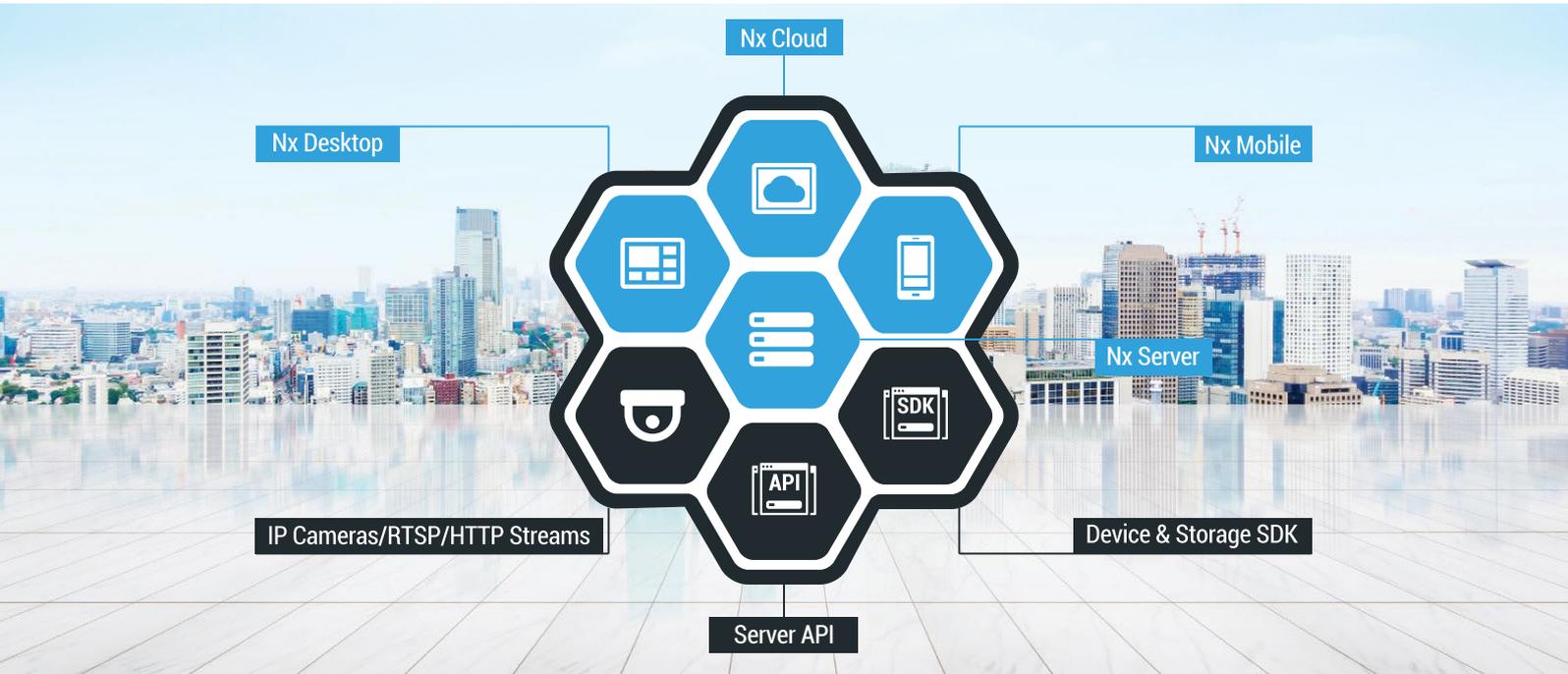


Your NX Witness Distributor

Open Video Platform.

Simple. Reliable. Customizable.

Nx Witness is an endlessly customizable IP Video Management platform that gives users the ability to create tailored networked video solutions for any type of project, for use by anyone, on any device.



You choose your devices.

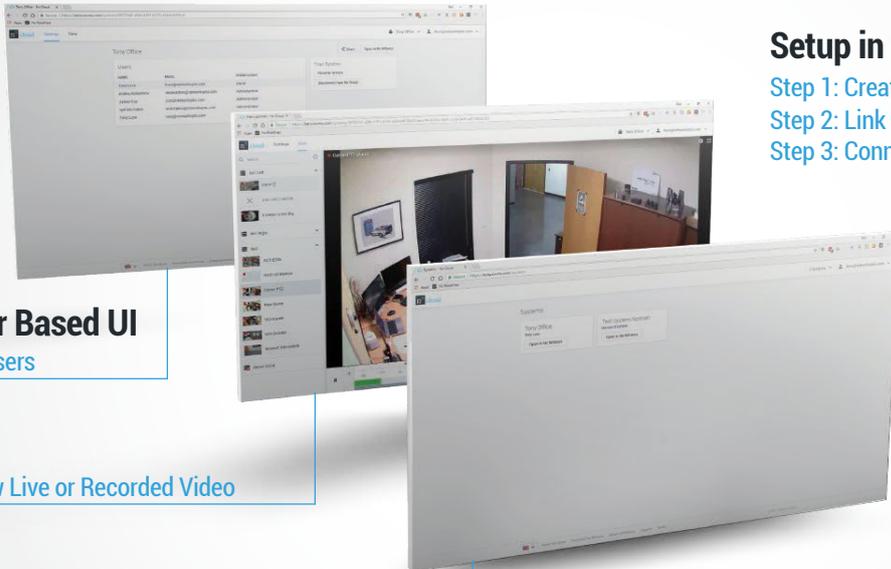
Nx Witness has applications for all major operating systems so our users are not limited by what device or operating system they choose to use on their desktops, mobile devices, rack mount servers, or even low-powered embedded devices.

Cloud	Desktop	Mobile	Server
A cloud-based service that enables simple, centralized remote access and insight into any Nx Witness system.	A rich media player designed to view and manage a single Nx Witness system from a desktop or laptop PC.	A mobile app designed for viewing Nx Witness system video and events while on-the-go.	A media server responsible for discovering, connecting to, and managing system devices and data.
SUPPORTED BROWSERS:	DESKTOP OS SUPPORT:	MOBILE OS SUPPORT:	SERVER OS SUPPORT:
<ul style="list-style-type: none"> Google Chrome Mozilla Firefox Opera / Opera Neon Microsoft Edge Apple Safari 	<ul style="list-style-type: none"> Microsoft Windows Ubuntu Linux Apple / Mac OSX 	<ul style="list-style-type: none"> Google Android Apple iOS 	<ul style="list-style-type: none"> Microsoft Windows Ubuntu Linux ARM Devices



Nx Cloud Simplifies Everything.

The Nx Witness Cloud service makes connecting to and managing Nx Witness System(s) simple. Set up in Seconds. Connect from anywhere. Share with an unlimited number of Users.



Setup in Seconds

- Step 1: Create an Nx Cloud Account
- Step 2: Link your System to Nx Cloud
- Step 3: Connect, View, and Manage from anywhere.

Browser Based UI
Manage Users

View Live or Recorded Video

Quickly Connect to any System



Connect. View. Manage. Scale.

Nx Cloud is a public cloud application hosted on Amazon AWS that enables simple remote connectivity, streaming, and management of one or an unlimited number of Nx Witness Systems.

SUPPORTED BROWSERS: Google Chrome Mozilla Firefox Opera / Opera Neon Microsoft Edge Apple Safari

CONNECT	VIEW	MANAGE	SCALABILITY / INTEGRATION
NAT Traversal	Live Video (adaptive)	System Settings	Unlimited# of Systems
Data Proxy via AWS	Recorded Video (adaptive)	User Permissions	Unlimited # of Users
Simple Credentials	Camera Details	Cloud Connections	Unlimited # of Devices
Encrypted Communications	Keyword Search	Email Notifications	Cloud API
Wifi / LAN / WAN	Calendar Search		
4G / LTE / Data	Flex Timeline		



Your NX Witness Distributor

SCALABILITY

OF CONNECTED SYSTEMS: UNLIMITED

OF USERS: UNLIMITED

NX CLOUD SERVICES

CLOUD CONNECT



Connect any Nx Witness System to Nx Cloud for simple remote connectivity from anywhere using Network Optix's NAT Traversal and Cloud Data Proxy technology.



USER MANAGEMENT

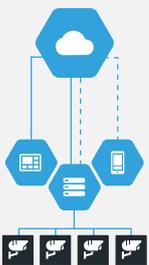


Add an **unlimited number** of users to a single Nx Cloud System.

Share access to your Nx Witness System in seconds using only email addresses.

Create **Custom Roles** to quickly assign access to multiple Nx Cloud connected Systems.

HOW IT WORKS



Nx Witness applications (Nx Server, Nx Desktop, Nx Mobile) connect via an active Internet connection to the Nx Cloud service and are automatically connected together using a combination of NAT Traversal (direct connection) and data proxy (connected via Nx Cloud) technologies.

NX CLOUD BROWSER & DEVICES INTERFACE



NX CLOUD FEATURES

CONNECTIVITY

NAT TRAVERSAL: CONNECT DIRECTLY TO PROXIED NX WITNESS SERVERS

CLOUD DATA PROXY: CONNECT VIA AWS CLOUD PROXY SERVICE

INTERFACE TABS

SYSTEMS: VIEW CONNECTED SYSTEM TILES

SETTINGS: VIEW USERS RENAME SYSTEM DISCONNECT SYSTEM

VIEW: USE NX CLOUD CLIENT TO VIEW LIVE OR RECORDED VIDEO

SECURITY

SECURE PASSWORD RECOVERY: VIA EMAIL

HTTPS: OPENSLL ENCRYPTED SERVER/CLIENT/CLOUD CONNECTIONS

EMAIL: TLS (TRANSPORT LAYER SECURITY)

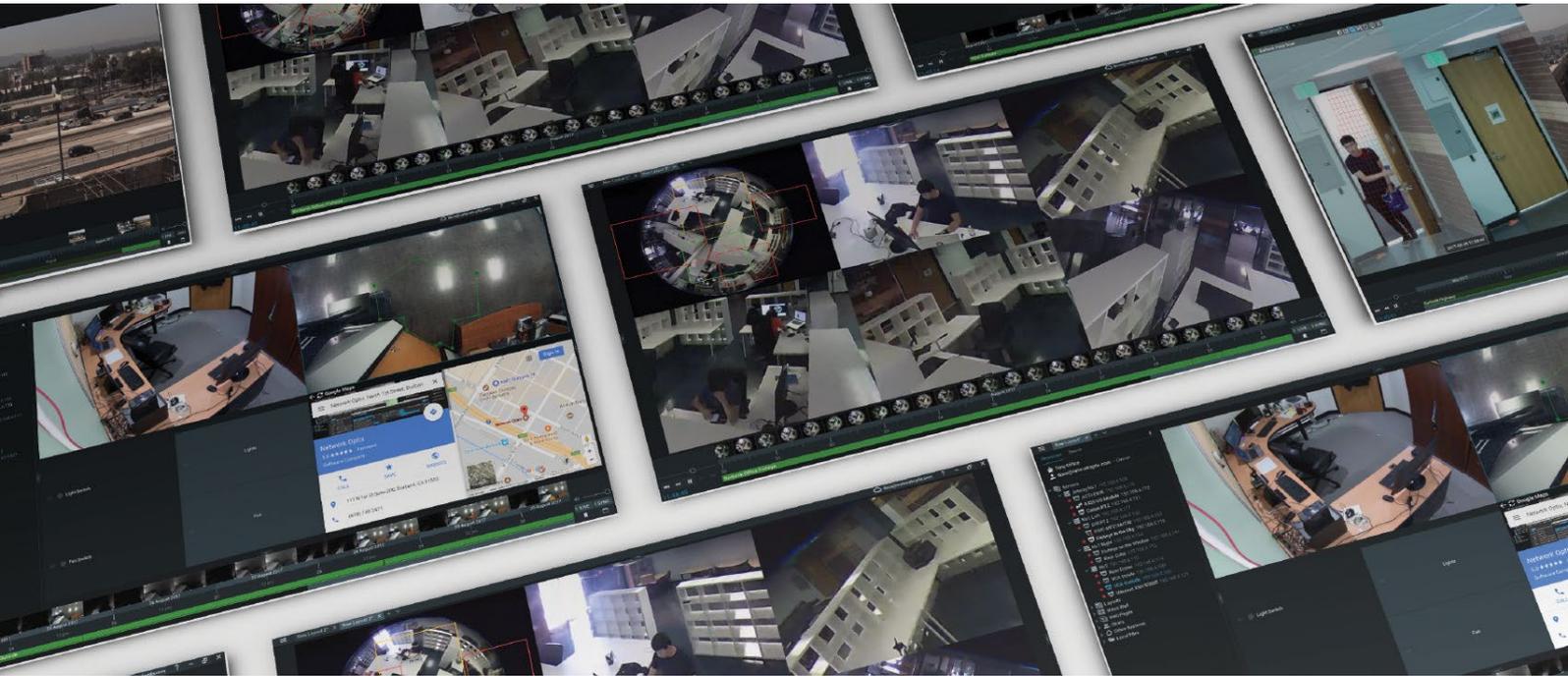
PASSWORDS: COMPLEX MULTI-LEVEL HASH

DEVELOPER TOOLS

CLOUD API: AVAILABLE UPON REQUEST

"The way all video software interfaces should look and operate."

A rich media player with a flexible GRID interface, unmatched speed and responsiveness, instant event notifications, an embedded browser, and a user experience unlike any other video management software.



One App. Many Features.

Nx Witness Desktop combines performance, ease-of-use, and a 'let the user decide how best to use the software' approach into a single cross-platform lightweight app capable of running on everything from Atom based tablets to Xeon based servers.

SUPPORTED OPERATING SYSTEMS:  Microsoft Windows  Ubuntu Linux  Apple / Mac OS X

USABILITY	MEDIA	CONFIGURATION	SEARCH
 Drag & Drop Everything	 IP Cameras / Encoders/ DVRs	 Events & Rules Engine	 Smart Motion Search
 Consolidated Notifications	 RTSP/HTTP Streams	 User Management	 Keyword Search
 Flex Timeline	 I/O Devices	 IP Cameras / Encoders	 Calendar Search
 Customizable Layouts	 Web Pages	 Server Management	 Time-Slice Search
 Digital Maps	 Videos	 I/O Device Management	 Bookmarks
 Adaptive Scaling	 Images	 Storage Management	 Audit Trail

MAXIMUM # OF GRID ITEMS

64 BIT OS: 64 Items (e.g. 64 live streams)

32 BIT OS: 24 Items (e.g. 24 live streams)

SUPPORTED OPERATING SYSTEMS

WINDOWS



Windows 7
Windows 8
Windows 8.1
Windows 10
Windows Server 2008
Windows Server 2008 R2
Windows Server 2012
Windows Server 2012 R2
Windows 10 Enterprise

LINUX



Ubuntu Linux 14.04 LTS
Ubuntu Linux 16.04 LTS
* Additional possible

MAC



OSX 10.11
OSX 10.12

HARDWARE REQUIREMENTS

MINIMUM SUPPORTED SPECS

HARD DRIVE: HDD/SSD/mSATA
RAM: 2GB
CPU: Quad Core Intel Celeron CPU or higher
GRAPHICS: Intel HD Graphics 3000
w/ OpenGL2.1 support
NETWORKING: 1GB NIC

PERFORMANCE SPECS

HARD DRIVE: Performance SSD
RAM: 16 GB RAM
CPU: Intel Core i5
GRAPHICS: NVIDIA GeForce GTX 1050
(OpenGL2.1 support is required)
NETWORKING: 10 GB NIC

NX DESKTOP APPLICATION



SUPPORTED MEDIA PLAYBACK ON GRID

LIVE STREAMS

CODECS: H.265 H.264 MJPEG

OFFLINE MEDIA

VIDEOS: AVI MKV MP4 MOV TS M2TS MPEG MPG FLV WMV 3GP

IMAGES: JPG PNG GIF BMP TIFF

CONNECTED DEVICES

I/O DEVICES: Status and Triggers

SERVERS: Server Health Monitoring

BROWSER

WEB PAGES: Responsive Websites / Progressive Web Apps

VIEWING MODES

MEDIA PLAYER: View, edit, and export offline videos and images

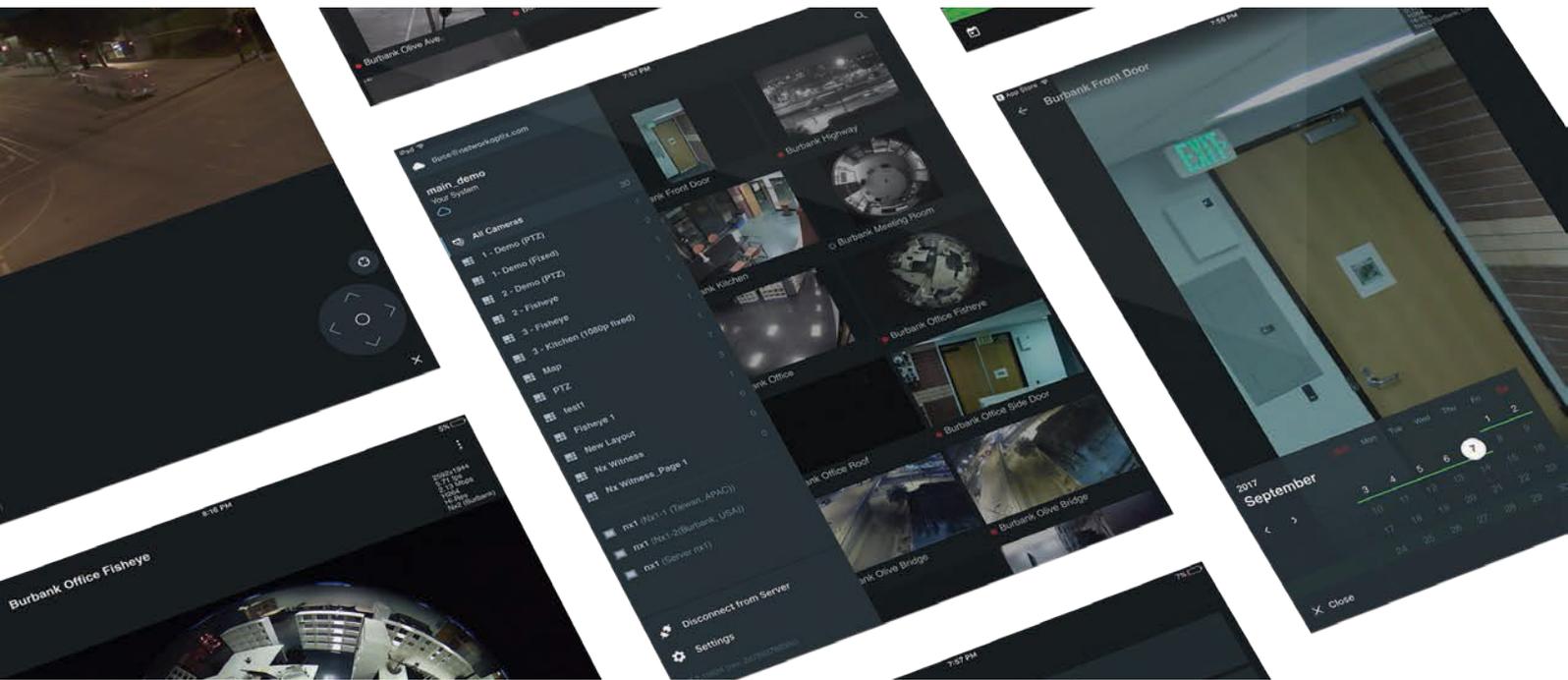
CONNECTED: View, configure, and manage any Nx Witness System

VIDEOWALL: Put Nx Desktop into VideoWall mode to control remotely

SHOWREEL: Fully customizable timed viewing tour of any GRID media

Smart Phone. Smart Video.

Nx Mobile for iOS and Android smartphones and tablets provides fast, dependable mobile access to any Nx Witness System.



Connect. View. Search. Control.

Nx Witness Mobile - with a custom developed media player - is a low-latency, user-friendly mobile application for iOS and Android devices that allows users to connect to, view, search, and control IP cameras over Wifi or Data networks.

SUPPORTED OPERATING SYSTEMS:  Google Android  Apple iOS

CONNECT	VIEW	SEARCH	CONTROL
 Wifi	 Live Video (adaptive)	 Keyword	 Nx1 Lite Client
 Data 4G/LTE	 Recorded Video (adaptive)	 Calendar	 Advanced PTZ / Standard PTZ
	 Layouts	 Flex Timeline	 Fisheye Dewarping (soon)
			 2 Way Audio (soon)



COMPATIBLE DEVICES

SMART PHONES: 64 Items (e.g. 64 live streams)

iOS 24 Items (e.g. 24 live streams)

SUPPORTED OPERATING SYSTEMS

ANDROID

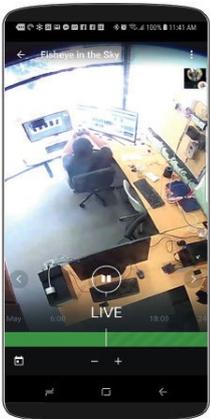


Jelly Bean	4.1 - 4.3.1
Kit-Kat	4.4 - 4.4.4
Lollipop	5.0 - 5.1.1
Marshmallow	6.0 - 6.0.1
Nougat	7.0 - 7.1.2
Oreo	8.0

iOS



iOS 5	5.0 - 5.1.1
iOS 6	6.0 - 6.1.6
iOS 7	7.0 - 7.1.2
iOS 8	8.0 - 8.4.2
iOS 9	9.0 - 9.3.5
iOS 10	10.0 - 10.3.3
iOS 11	11.0



NX MOBILE



SUPPORTED MEDIA PLAYBACK

STREAMS

CODECS: H.265 H.264 HLS

FEATURES

REMOTE CONNECT: Login using local or Nx Cloud credentials

LIVE THUMBNAILS: Thumbnails refresh in real time

KEYWORD SEARCH: Search for cameras or layouts by name

CALENDAR SEARCH: Search by date and time

ADVANCED PTZ: Point Pan, Zoom, Tilt Controls

FISHEYE DEWARPING: Dewarp fisheye images

ADAPTIVE SCALING: Hi / Low Resolution Switching Transcoding

LAYOUTS: View thumbnails of System Layouts

Nx1 LITE CLIENT CONTROL: Remote control of Nx1 Lite Client

QUICK SYSTEM SWITCH: Quickly switch between multiple Nx Witness Systems

Lightweight. Powerful. Server Hive.

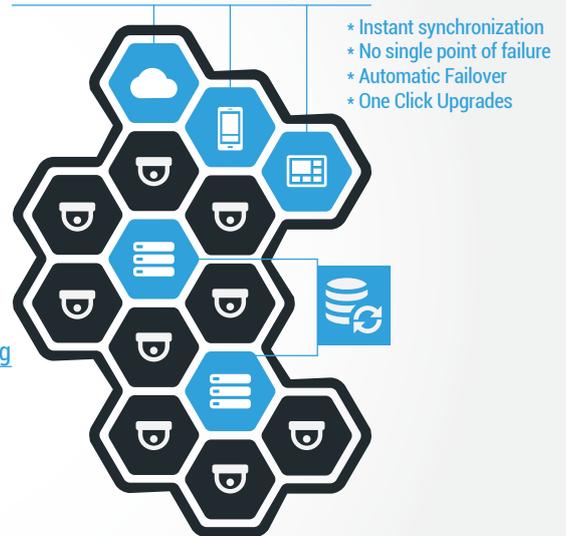
The Nx Server application is the foundation of the entire platform - with the ability to operate alone or as one part of a hive.

BROWSER UI



SERVER HIVE

Connect to any Server w/ any Client



Discover. Manage. View. Integrate.

The Nx Server application is a lightweight, powerful media server responsible for discovering, connecting to, and managing Nx Witness system devices and data.

SUPPORTED OPERATING SYSTEMS:  Microsoft Windows  Ubuntu Linux  ARM Devices

DISCOVER	MANAGE	VIEW	INTEGRATE
 IP Cameras (ONVIF, Custom)	 IP Cameras / NVRs / DVRs	 Live Video (adaptive)	 HTTP Generic Events
 RTSP/HTTP Streams	 Advanced Routing	 Recorded Video (adaptive)	 HTTP Request-as-an-Action
 I/O Devices	 Storage (HDD/NAS/DAS)	 Server Health	 Server API
 3rd Party DVR / NVRs	 Events & Rules Engine	 Log Files	 Storage SDK
 Nx Servers / Systems	 Failover	 Audit Trail	 Video Source SDK
 Samba NAS	 Transcoding	 Storage Status	 Any Device or System

SCALABILITY

OF CLIENTS PER SERVER: THOUSANDS

OF CLIENTS PER SYSTEM: UNLIMITED

OF STREAMS PER SERVER: 128

OF SERVERS IN A SERVER HIVE: 50 *

* 50 is a recommended maximum.
Contact support for more info.

SUPPORTED OPERATING SYSTEMS

WINDOWS



Windows 7
Windows 8
Windows 8.1
Windows 10
Windows Server 2008
Windows Server 2008 R2
Windows Server 2012
Windows Server 2012 R2
Windows 10 Enterprise

LINUX



Ubuntu Linux 14.04 LTS
Ubuntu Linux 16.04 LTS
*contact support for others

ARM



Raspbian
Bananian
*contact support for others

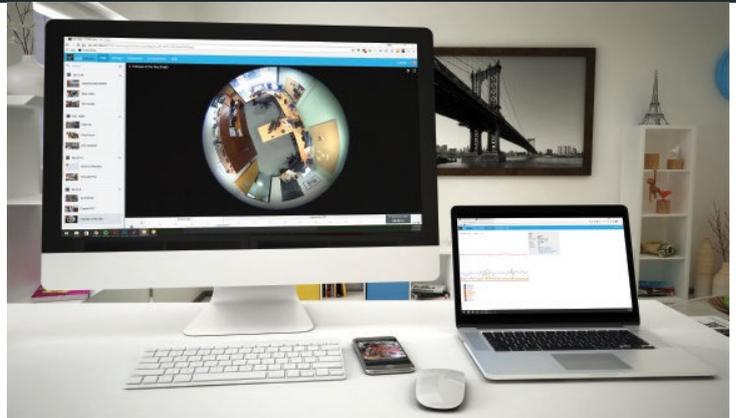
HARDWARE RECOMMENDATIONS

RECOMMENDED BASED ON # OF STREAMS

STREAMS	RAM	NIC	CPU
Up to 8	1 GB	1 GB	Dual Core ARM
Up to 16	2 GB	1 GB	Dual Core Atom
Up to 32	4 GB	1 GB	Quad Core Atom
Up to 64	8 GB	1 GB	Core i3
Up to 128	16 GB	1 GB	Core i3

* CPUs change fast.
And this spec sheet is fixed.

NX SERVER WEB ADMIN



SUPPORTED MEDIA STREAMING

LIVE STREAMS (Viewed in Nx Desktop)

VIDEO: H.265 H.264 MJPEG

AUDIO: AAC PCM (Mu-Law, A-law) g726 MP3

LIVE STREAMS (Available to pull from Nx Server to 3rd Party)

VIDEO: H.265 H.264 MJPEG WebM

AUDIO: AAC PCM (Mu-Law, A-law) g726 MP3

PROTOCOLS: RTSP MJPEG WebM HLS

OTHER

AUTOMATIC CAMERA FAILOVER: ~1 MIN. CONFIGURABLE.

TRANSCODING: SUPPORTED (FOR WEB CLIENT, MOBILE, API)

DATABASE: SQLITE + PROPRIETARY ARCHIVE INDEX

SINGLE SIGN ON: LDAP / ACTIVE DIRECTORY

SECURITY: OPEN SSL SALTED MD5 HASH TLS/SSL HTTPS

DEV TOOLS: SERVER API (HTTP) VIDEO SOURCE SDK STORAGE SDK

NAS: SAMBA (AUTHENTICATED, UNAUTHENTICATED)