

User Experience Integrations and Component Architecture

LiveNX

User Experience integrates as a software module directly with LiveNX, the LiveAction network performance and analytics platform. Using User Experience with LiveNX, enterprises gain real-time and continuous insight into application and user level activities.

- Integrated LiveNX and User Experience dashboard for instant visibility of site health, network devices, application usage and application performance.
- Quickly identify the sites that are experiencing performance degradation and the application impacted.
- From the site, drill down to examine network condition including bandwidth utilization, link errors, QoS metrics and application that are competing for the bandwidth.

LiveNX Monitor of Monitors

LiveNX Monitor of Monitors provides a single-pane-of-glass for server setting, system health, sites and configuration aggregating multiple geographical or organizationally segmented LiveNX domains. Through an aggregation layer, each LiveNX server domain instance injects relevant data for summary dashboard views and management by way of a north bound REST API.

LiveSensor Integration (optional purchasable module)

NetFlow generation to provide application visibility and application recognition in the absence of flow-exporting devices.

- Software-based packet analysis
- Deep Packet Inspection
- Application layer visibility (e.g. Skype, BitTorrent, Citrix)
- Supports multi vendor environments

Deployment Models:

- Single Server/Node deployed as single system
- Multi-Server with nodes deployed anywhere there is IP connectivity

User Experience System Requirements

Deployment Options

User Experience components can be deployed :

Component	On-premise Private Agents	Public cloud Global Agents
Image type	OVA	AMI
Monitor of Monitors	LiveNX MoM OVA	LiveNX MoM AMI
Platform	LiveNX Server & Platform OVA	LiveNX Server & Platform AMI
Server	All-in-one	All-in-one
LiveNX Node	LiveNX OVA	LiveNX AMI
LiveNX Analytics Node	LiveNX Analytics OVA	LiveNX Analytics AMI
Endpoint Agent	Endpoint Agent OVA	Endpoint Agent AMI
LiveSensor	LiveSensor OVA	LiveSensor AMI

Server/Node

- Windows 64-bit Operating System – Server 2008 or 2012 R2, Windows 7 (Professional or Ultimate) with .NET framework v3.5.1+
- Linux RHEL 7.1 or 7.2 /CENTOS 6.7 or 6.8 with GNOME UI installed
- For less than 100 devices or less than 100K ops/sec:
 - 8 Core 2+ GHz CPU
 - 8 GB RAM
 - 2-6 TB 7,200 RPM HD1
- For 100-500 devices or less than 200K ops/sec
 - 12 Core, 2+ GHz CPU
 - 16 GB RAM
 - 3-10 TB 7,200 RPM HD1
- For 500-1,000 devices
 - 2x12 Core, 2+GHz CPU
 - 16 GB RAM
 - 5-10 TB, 7,200+ RPM HD1

- Virtual Machine
 - Adequate core and storage allocation
 - Store: local store preferred, virtual thick disk preferred
 - VMware ESXi 5.1 or later, recommended for production environments
 - vMotion Supported
 - Compatible with most VM systems
 - VMware products, Oracle VirtualBox, Microsoft Hyper-V 6.0+, Citrix Xen

¹Disk usage depends on network traffic pattern. For higher performance use RAID 10 or RAID 0 if redundancy is not required.

All-in-One Server & Platform OVA, Node OVA

- Custom—Less than 25 devices or less than 25k ops/sec; targeted at small laptop deployments or starter platform (size not available for Node OVA)
 - 2 vCPU Xeon or i7
 - 4 GB RAM
 - 250 GB data disk
- Small—Less than 100 devices or less than 100k ops/sec
 - 8 vCPU Xeon or i7
 - 16 GB RAM
 - 4 TB data disk
- Medium—100 to 500 devices or less than 200k ops/sec
 - 16 vCPU Xeon or i7
 - 32 GB RAM
 - 6 TB data disk
- Large—500 to 1,000 devices or greater than 200k ops/sec
 - 32 vCPU Xeon or i7
 - 32 GB RAM
 - 8 TB data disk

LiveSensor OVA (Optional)

- Monitor 1Gbps
- Virtual Hardware
 - 4 vCPU
 - 8GB of RAM
 - 50GB Disk
- Virtual Platform
 - VMware ESXi v5.0+
 - VMware Hardware Version 8 (vmx-8)
- Network Hardware
 - At least 2 Physical NICs on ESXi
 - Support up to 10Gbps

NOTE: Virtual NICs on OVA are utilizing VMXNET

LiveNX 7.0 Network Device Support

LiveNX Flow

LiveNX Flow provides advanced end-to-end system level flow visualization for multi vendor networks. The following devices have gone through flow-analysis testing with LiveNX.

- Adtran NetVanta Series Routers
- Alcatel-Lucent Routers
- Brocade Series Routers
- Cisco Series Routers (ISR Series, CRS-1, ASR 1000 & ASR 9000 Series Routers)
- Cisco Catalyst Switches
- Cisco Nexus Switches (Nexus 3000, 7000 & 9000 Series)
- Cisco ASA 5500 Series Firewalls
- Cisco AnyConnect Network Visibility Module on Windows and Mac OS X Platforms
- Cisco Meraki MX Security Appliance
- Cisco NetFlow Generation Appliance
- Extreme Network Switches
- F5 BIG-IP Application Delivery Controller Platforms
- Gigamon GigaSMART Hewlett-Packard
- Enterprise Procurve Series Switches
- Ixia's Network Visibility Solution
- Juniper MX Series Routers
- nTop nProbe
- Palo Alto Networks Firewalls
- Riverbed SteelHead WAN Optimization Controllers
- Silver Peak WAN Optimization Controllers
- Viptela vEdge Routers
- Zien ZFlow

LiveNX QoS Configure

LiveNX QoS Configure provides for configuration and troubleshooting Quality of Service for Cisco routers and switches.

- Cisco Series Routers: 800, 1700, 1800, 1900, 2600, 2600XM, 2800, 2900, 3600, 3700, 3800, 3900, 4300, 4400, 7200, 7600, ASR1000, CSR 1000V

Recommend IOS versions 12.3 or higher or 15.0 or higher for use with the software (IOS XE 2.6.0 or higher for ASR 1000 series). Earlier IOS versions may also work but are not officially supported. General-release IOS versions are recommended, although early- and limited-release versions will also work with LiveNX.

- Cisco Catalyst Series Switches: 3850 & 4500-X

Limited LiveNX QoS Monitor support on Layer 3-routable interfaces and VLANs depending upon Cisco hardware capabilities

- Cisco Nexus Series Switches: 7000 Series are partially supported

LiveNX QoS Monitor

LiveNX QoS Monitor provides quality of service monitoring and troubleshooting for Cisco router and switches.

- Cisco Series Routers: 800, 1700, 1800, 1900, 2600, 2600XM, 2800, 2900, 3600, 3700, 3800, 3900, 4300, 4400, 7200, 7600, ASR1000, CSR 1000V
- Cisco ASR 9000

Recommend IOS versions 12.3 or higher or 15.0 or higher for use with the software (IOS XE 2.6.0 or higher for ASR 1000 series). Earlier IOS versions may also work but are not officially supported. General-release IOS versions are recommended, although early- and limited-release versions will also work with LiveNX.

- Cisco Catalyst Series Switches: 3650, 3850 & 4500-X

Limited LiveNX QoS Monitor support on Layer 3-routable interfaces and VLANs depending upon Cisco hardware capabilities

- Cisco Nexus Series Switches: 7000

LiveNX IP SLA

Cisco Series Routers: 800, 1700, 1800, 1900, 2600, 2600XM, 2800, 2900, 3600, 3700, 3800, 3900, 4300, 4400, 7200, 7600, ASR1000, CSR 1000V are supported.

LiveNX LAN

Cisco Catalyst Series Switches: 2960, 2960-X, 3560, 3650, 3750, 3850, 4500, and 6500 are supported.

LiveNX Routing

Cisco Series Routers: 800, 1700, 1800, 1900, 2600, 2600XM, 2800, 2900, 3600, 3700, 3800, 3900, 4300, 4400, 7200, 7600, ASR1000, CSR 1000V are supported.



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