

## What's New in LiveNX 22.4.0

- Single Sign On (SSO) enhancements:
  - First-time users who log in with single sign on will now have a user automatically created for them within LiveNX (Dynamic Authorization via SSO)
  - Addition of group key attribute in SAML configuration page

The screenshot shows the LiveAction configuration interface. The top navigation bar includes the LiveAction logo and tabs for 'NX', 'UX', and 'LiveNCA'. A status bar at the top right displays system metrics: 363, 26, 30, and 115754. The left sidebar contains a search bar and a list of configuration categories, with 'Single Sign On' selected. The main content area is titled 'SINGLE SIGN ON' and is currently 'Enabled'. It features two radio buttons for 'SAML' (selected) and 'ADFS'. Below these are several input fields: 'Entity ID \*', 'Host Name \*', 'Consumer Login URL \*', and 'Consumer Logout URL \*'. A red box highlights the 'LiveNX Group Key Attribute \*' field, which contains the text 'LiveNX-Group-Name'. Below this field is a checked checkbox labeled 'Allow existing users without LiveNX Group Key Attribute'. To the right of the main form are fields for 'Identity Provider SSO URL \*', 'Identity Provider Trust URL \*', and 'Certificate \*'. A 'Save' button is located at the bottom right of the configuration area.

- Default dashboards have been created for VMware SD-WAN and Prisma SD-WAN

**VMware SD-WAN Application Flow Path by TX Bytes**

Application Name--Flow Path	RX Bytes	TX Bytes
syslog--Edge to edge direct (4)	1.35 KB	5.42 MB
SD-WAN Control--Edge to cloud via gateway (0)	2.28 MB	3.26 MB
tcp--Edge to edge direct (4)	843.76 KB	2.58 MB
ssl--Edge to edge direct (4)	360.78 KB	996.62 KB
tds--Edge to edge direct (4)	1.72 MB	763.05 KB
Kafka--Edge to edge direct (4)	83.54 KB	561.39 KB
SD-WAN Management--Edge to cloud via gateway (0)	249.33 KB	478.95 KB
ldap--Edge to edge direct (4)	268.98 KB	418.54 KB

**VMware SD-WAN Flow Path by TX Bit Rate**

**VMware SD-WAN QoS by TX Bytes**

Priority--Traffic Type	RX Bytes	TX Bytes
Normal (3)--Transactional (1)	2.34 MB	11.03 MB
Unset (0)--Realtime (0)	2.28 MB	3.26 MB
High (2)--Transactional (1)	2.03 MB	1.56 MB
Normal (3)--Bulk (2)	484.52 KB	635.36 KB
High (2)--Realtime (0)	130.7 KB	79.41 KB
Low (4)--Transactional (1)	9.74 KB	12.59 KB
High (2)--Bulk (2)	914 bytes	1.02 KB
Normal (3)--Realtime (0)	1.08 KB	0 bytes

**VMware SD-WAN Link Policy by TX Bytes**

**VMware SD-WAN Site Performance by Peak TX Latency**

Site	Peak RX Latency	Peak TX Latency
Unspecified	24 ms	23 ms
Palo Alto (VMware)	0 ms	0 ms

**VMware SD-WAN Site to Site Performance by Peak TX Latency**

Src Site--Dat Site	Peak RX Latency	Peak TX Latency
Unspecified--Internet	24 ms	23 ms
Palo Alto (VMware)--Internet	0 ms	0 ms

**VMware SD-WAN Application TCP Performance by Peak TCP RTT**

Application	Peak TCP RTT
dns	0.0
ip	0.0
SD-WAN Management	0.0
SD-WAN Control	0.0

**VMware SD-WAN Top Links by Site by TX Bit Rate**

Link Name--Site	RX Bit Rate	TX Bit Rate
AT&T Services--Unspecified	16.34 Kbps	17.38 Kbps
169.254.9.10--Palo Alto (VMware)	2.7 Kbps	2.59 Kbps
GES_Private--Palo Alto (VMware)	0.01 Kbps	0 Kbps

**VMware SD-WAN Top Links by Device by TX Bit Rate**

Link Name--Device	RX Bit Rate	TX Bit Rate
AT&T Services--QA-HE_VeloEdge01	16.34 Kbps	17.38 Kbps
169.254.9.10--VeloCloud2(NonSmp)	2.7 Kbps	2.59 Kbps
GES_Private--VeloCloud2(NonSmp)	0.01 Kbps	0 Kbps

**Top Applications Average Inbound & Outbound Separated**

Application	Inbound (Mbps)	Outbound (Mbps)
epnsdp	77.0	1.9
unstream	12.7	1.9
TRC Custom Application YouTube	7.0	1.9
https	6.0	1.9
TRC ESPN Vid	5.6	1.9
performance	5.4	1.9
ssl	3.7	1.9
espn-browsing	2.5	1.9
ssh	2.4	1.9
SD-WAN Management	2.2	1.9
unstream	12.6	1.9
https	5.7	1.9
performance	5.4	1.9
rp-video	3.3	1.9
ssh	2.4	1.9
smtp	2.1	1.9
panorama	2.1	1.9
rp	2.0	1.9
epnsdp	2.0	1.9
http	1.9	1.9

**Top Web Servers HTTP Host**

**Prisma SD-WAN QoS by Bit Rate**

**Top Conversations Average Outbound**

IP Address	Average Outbound (Mbps)
10.4.100.207--10.4.2.184	7.9
10.4.58.14--10.4.3.101	4.5
192.168.2.151--10.2.101.141	3.3
10.4.7.132--184.105.70.163	2.3
10.209.4.23--test (10.209.0.251)	2.0
54.245.247.95--10.4.2.17	1.4
10.209.52.30--10.1.1.218	1.3
10.4.100.1--10.4.102.91	1.3
64.68.127.85--10.4.2.176	1.1
64.68.127.85--10.4.2.17	1.0

**Top DSCP Average Outbound**

DSCP Code Point	Average Outbound (Mbps)
0 (BE)	4.8
46 (EF)	0.7
24 (AF41)	0.1
24 (CS3)	-0.1
18 (AF21)	-0.1
8 (CS1)	-0.1
16 (CS2)	-0.1
48 (CS6)	-0.1
26 (AF31)	-0.1
38 (AF43)	-0.1

**Prisma SD-WAN WAN Path by Bytes**

WAN Path Name	Total Bytes
vpn:public:Cloudgenix-SJ-Branch1:AT&T Broadband-Cloudgenix-DC1:AT&T:15...	104.34 MB
direct:AT&T Broadband-public:1-publicwan:1	32.76 MB
direct:Verizon MPLS:private:1-privatewan:2	4.47 MB
vpn:private:Cloudgenix-SJ-Branch1:Verizon MPLS:Cloudgenix-DC1:PW6:15832...	2.41 MB
0	176.78 KB

**Site Utilization Service Provider - Outbound**

City	Utilization (%)
Austin	91.2
Seattle	88.5
London	9.1
Impairment	5.7
Los_Angeles	2.0
DC-New_York	0.4
Tokyo	0.3
San_Jose	0.1
Birmingham	-0.1
Sydney	-0.1

**Site Utilization Service Provider - Inbound**

City	Utilization (%)
Velo Cloud SD-WAN	27.3
Austin	26.1
Seattle	18.0
Los_Angeles	9.4
Impairment	5.9
London	2.6
DC-New_York	1.6
Tokyo	0.3
San_Jose	-0.1
Birmingham	-0.1

**Prisma SD-WAN DSCP Map by Bit Rate**

DiffServ Code Point Map	Average Bit Rate
56 (CS7)	1.19 Mbps
50, 56 (CS7)	25.01 Kbps
24 (CS3), 56 (CS7)	21.53 Kbps
50	15.55 Kbps
10 (AF11)	8.58 Kbps
24 (CS3), 32 (CS4)	6.37 Kbps
48 (CS6)	4.33 Kbps
42	1.77 Kbps

- A new Semantic Management page has been added to consolidate Tag and Service Provider management into a single location

NAME	IS USED	SITE	DEVICE	INTERFACE
egg	✓		WLC-NetflowReplay	(1) GigabitEthernet3, GigabitEthernet2, Null0, GigabitEthernet2, GigabitEthernet3, Bridge, GigabitEther... (55)
CORE	✓		RTR-DC-CORE, RTR-DC-MPLS	(2)
LOUISVILLE	✓		RTR_Louisville	(1)
moshea	✓		RTR_Seattle, RTR_Louisville, RTR_LosAngeles, RTR_London	(4)
test1jeff	✓		ASA Firewall, FortiGate Firewall, MerakiNetflow, CS-C3850-23-31, CS-C3650-23-36, PaloAltoNetwor...	(6)
test tag	✓			GigabitEthernet4 (1)
VeloCloud	✓		TEST-LubrizoL_Velo, VeloIPFixMar21	(2) private2 (1), private1 (1)
Name:private2	✓			
Name:private1	✓			
Central	✓	Madison, Austin, Birmingha...	(3)	
lab	✓		F5sFlowReplay	(1)
APAC	✓	Sydney	(1) RTR_Louisville	(1)
Name:public1	✓			public1 (1)
Tenant1	✓	Azure West US, Austin, AW...	(4)	
sTAG	✓	San Jose	(1)	
Test	✓	test site	(1)	GigabitEthernet2 (1)
sNateTest	✓	Louisville	(1)	
NewTag2021	✓	Louisville	(1)	
test_device	✓		RTR_SanJose	(1)
test_interface	✓			GigabitEthernet2, GigabitEthernet2 (2)
FORD	✓			GigabitEthernet3, GigabitEthernet3 (2)
vpc-efac9d8a	✓		AwsCM-Oregon	(1) VGW, IGW, private2, REJECTED, private1, public1 (6), REJECTED (1)
REJECTED	✓			
us-west-2	✓		AwsCM-Oregon	(1) VGW, IGW, private2, REJECTED, private1, public1 (6)
Velo-SDWAN	✓		TEST-LubrizoL_Velo, VeloIPFixMar21	(2)
MIKE2	✓		RTR_Seattle, RTR_Louisville, RTR_LosAngeles, RTR_London	(4)

Rows: 84 / 84

- Devices can now be migrated between nodes on the Device Management page

DEVICE	ADDRESS	VENDOR
Device	IP Address	Vendor
✓ RTR_SanJose	10.100.51...	Cisco
HE-CSR-206	10.4.201.2...	Cisco
SE-LiveWire-NY	10.100.50...	LiveAction

- VMware SD-WAN, Prisma SD-WAN, and Web application reports can be added to device entity pages

The screenshot displays the 'Settings' page for 'Device Entity Page Reports' in the LiveAction interface. The top navigation bar includes the LiveAction logo and user information. The main content area is divided into two sections: 'REPORT LIST' and 'REPORT DETAILS'.

**REPORT LIST:** A list of report types with expand/collapse icons:

- Device CPU/Memory Usage
- Application
- Top Applications (Inbound) Application
- Top Applications (Outbound) Application
- Top Conversations (Inbound) Top Conversations
- Top Conversations (Outbound) Top Conversations
- Top DSCP (Inbound) DSCP
- Top DSCP (Outbound) DSCP
- Line Card Operational State
- Power Supply Operational State
- Custom OID
- Custom OID

**REPORT DETAILS:** A panel for configuring report details, featuring a search bar and several expandable sections:

- Default Reports:**
  - Flow:** A section with a collapse icon (indicated by a red arrow). It lists various metrics such as Address, Applications, Application, HTTP Host, HTTP Media Type, HTTP Referer, HTTP Status Code, SSL Common Name, Web Analytics Application Response Time, and Web Analytics URL and URI Response Time.
  - Prisma SD-WAN (CloudGenix):** A section with a collapse icon (indicated by a red arrow).
  - QoS:** A section with a collapse icon (indicated by a red arrow).
  - VMware SD-WAN (VeloCloud):** A section with a collapse icon (indicated by a red arrow).
- SNMP:** A section with an expand icon.

At the bottom of the 'REPORT DETAILS' panel, there are 'Reset to Default' and 'Apply' buttons.

- Additional Fortinet SD-WAN reports were added

**CREATE REPORT**

**GENERAL SETTINGS**

**Name**  
Enter report group name...

**Presentation Mode**  
Standard

**Footnote**  
Enter report group description...

**Sharing Settings**

**Email**  
Enter an email address or AD entity...

**File Format**  
 Send PDF  Send CSV

**PDF Row Limits**  
All Rows

**Custom Logo**  
No Custom Logo

**REPORT LIST**  
Please choose report type  
Add New Report

**REPORT DETAILS**  
Fortinet  
SNMP  
Fortinet SD-WAN  
Fortinet SD-WAN Performance by SLA  
Fortinet SD-WAN Performance by Service Provider  
Fortinet SD-WAN Performance by Site  
Fortinet SD-WAN Performance by Site, Service Provider, and SLA

Cancel Save As Template Execute

- Support for cloud monitoring in GCP (Google Cloud Platform)

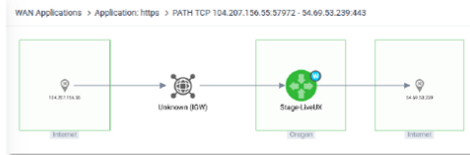
## LiveNX Cloud Monitoring for GCP

- **End to End Visibility**

- Visibility of VPC traffic (Flow Logs)
- GKE Annotations
- On Premise and Cloud Monitoring
- Easy to install and manage

- **Capabilities**

- Native VPC Flow Log and APIs
- Scalable Across Regions
- Easy to Install and Manage
- Packet Mirroring - LiveWire Virtual



Color Mapping By Display Filter Colors

- Web - 4927 / 6 flows
- Internet - 46,49,175,110
- Network Management - 288,180,28,228
- Enterprise Applications - 165,22,72,250
- Voice - 45,136,109,95
- Video - 37,49,227,12
- Network Mail Services - 5,108,786,250
- Directory - 10,1,1,154
- Routing - 10,1,1,154
- Device-Owner/Non-essential - 10,1,1,154
- All-Remaining - 10,1,1,154
- Flow mirroring disabled (com) - 10,1,1,154
- ACL Applied - 10,1,1,154
- Not configured - 10,1,1,154
- WAN - 10,1,1,154

Protocol	Src P. Addr	Src Port	Dst P. Addr	Dst Port	Application	Dst Rate	Packet Rate	Src Country	Src Eto	Out
UDP	16.172.127.64	4040	10.1.1.154	5060	yo-main*	602.67 Kbps	111.11 pps	GBUnited Kingdom	Internet -	Internet -
TCP	103.74.222.20	33280	10.1.1.154	8080	http-alt*	296.67 Kbps	305.56 pps	Internet -	Internet -	Internet -
TCP	103.74.222.20	33280	10.1.1.154	8080	http-alt*	296.67 Kbps	305.56 pps	Internet -	Internet -	Internet -
TCP	103.74.222.20	33280	10.1.1.154	8080	http-alt*	296.67 Kbps	305.56 pps	Internet -	Internet -	Internet -