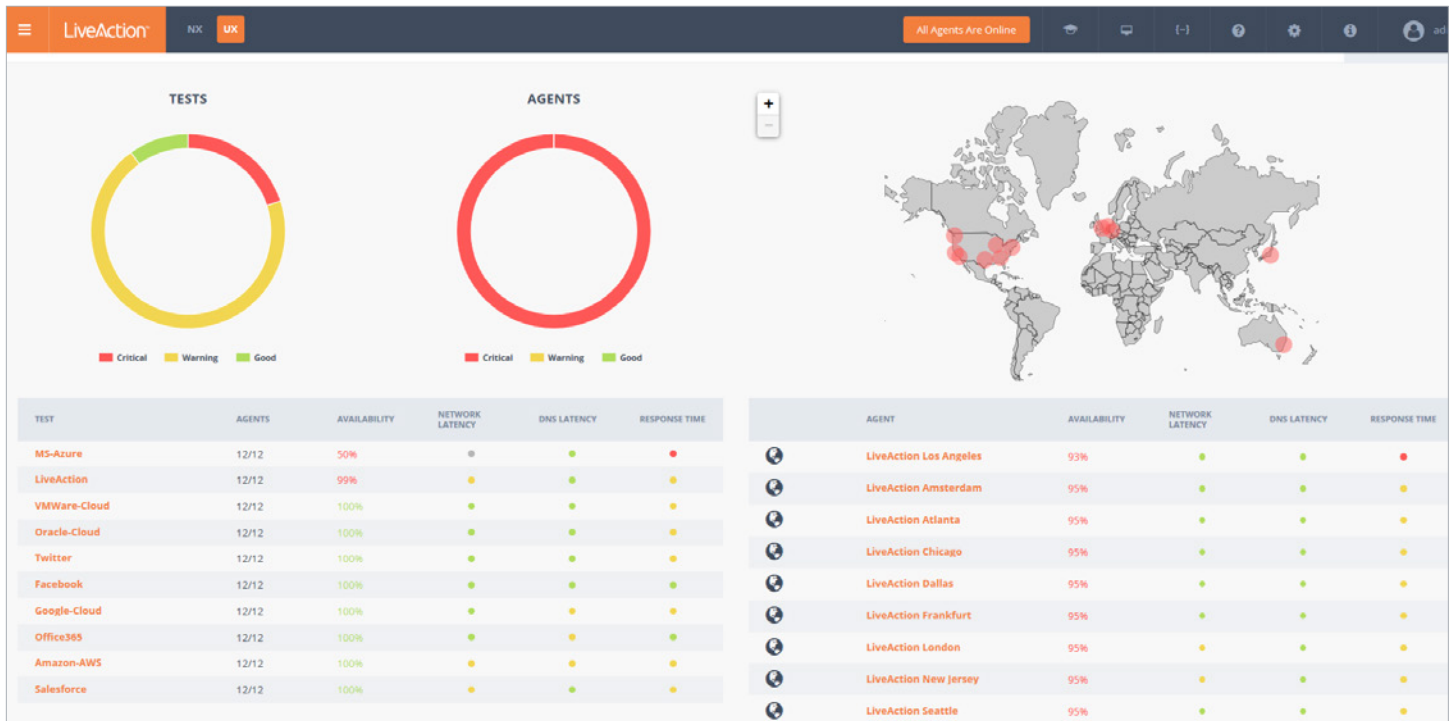# User Experience Monitoring

LiveUX dashboard summary – application performance

LiveUX is a software module available with the LiveNX performance and analytics platform. LiveUX proactively monitors end-user experience of cloud based, or on-premise web applications, by performing periodic active tests to collect data about your network and application performance.

You can gain insight into the availability and performance for any web-based application to address issues before they impact users. Correlating end-user experience and network information through integration with LiveNX application-aware network performance monitoring accelerates problem resolution and significantly simplifies your application performance monitoring challenges.

LiveUX can be hosted on Cisco NFVIS in order to provide an embedded capability on any Cisco router or switch running IOS XE to monitor user experience for any cloud based application, ranging from SaaS to UCaaS (Unified Communications as a Service).

LiveUX Components

The key components are:

- Agents – Takes measurements while behaving as a virtual user
- Controller in the cloud – The control and collection point for all the data acquired by the agents during measurements and tests
- LiveUX in the cloud or on-premise

Agents are deployed in your Enterprise network or the public Internet.

There are two different types of Agents:

- **Private agents** live inside your network allowing you to quickly
- filter problems pertaining to your network or outside of your network. The software-based private agent is distributed as lightweight Open Virtual Appliance (OVA) package and contains everything needed to install the platform. In addition, it hardens the Agent by installing firewall policies to restrict unauthorized external access.
- **Global agents** live outside of your enterprise network in the public cloud to perform availability and performance tests. Global agents are managed by LiveAction and located in major points of presence around the world. These agents are shared among LiveAction customers.

Collection

As part of the measurement of the service, the agent collects various latency, load, connect, wait times for the web page, including its enclosed resources. These measurement results are sent to the controller. The process is repeated at the next interval.

Agents are designed to perform continuous measurements. A supervisory function is embedded in every agent. The agent's principle responsibility is to monitor the application performance local to its environment.

LiveUX Overview

Summary Dashboard of Web Services Performance: Get a view of your website's performance and availability and know if there are any problems with your applications.

Network Data Integration: LiveUX integrates with LiveNX. For the "managed" part of your network, you can drill down to retrieve NetFlow, QoS and interface-related metrics.

Baselining: LiveAction collects metrics over time and learns the normal behavior of the website performance including network latency, DNS latency, and response times.

Alerting: Alerts are based on rules such as availability, network latency, DNS latency, and response time's threshold crossing alerts of tests.

Path Analysis: Private and Global agents perform traceroute tests to analyze the performance and latency of each hop. You can discover the domain names of the hops in the communication path along with the detailed response time analysis of each hop.
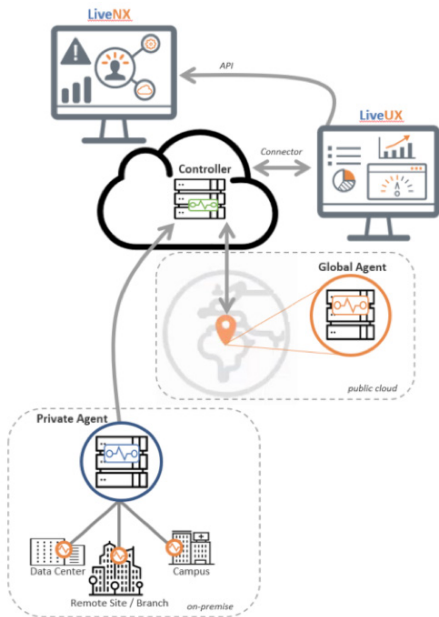
Time Series Report: A historical view and a near real-time detailed breakdown of each test. You can select any time range or location to compare and go as far back as you want.

Distribution Report: Histograms show the distribution of the data giving you a sense of whether performance is an issue. You can compare your test results among multiple agents and services. You can select any time range and go as far back as you want.

Waterfall Chart: With a browser embedded into the agent, LiveUX can provide performance data of each resource of your website for insight into the user's site experience.

NFV Support: LiveUX can be hosted on Cisco NFVIS. This provides an embedded capability in any Cisco device running IOS XE 16 to monitor user experience for cloud-based applications.

LiveUX Integrations and Component Architecture

LiveUX Architecture

Deployment Models:
- Single Server/Node deployed as single system
- Multi-Server with nodes deployed anywhere there is IP connectivity
- Hosted on Cisco NFVIS. Any Cisco router or switch running IOS XE16 can host a LiveUX Agent.

LiveNX

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

- Integrated LiveNX and LiveUX 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 applications impacted
- From the site, drill down to examine network conditions including bandwidth utilization, link errors, QoS metrics, and applications that are competing for the bandwidth

LiveNX 7 System Requirements

Server/Node Virtual Appliances
- Custom—Less than 25 devices or less than 25k flows/sec; targeted at small laptop deployments or starter platform, customer able to configure additional data disks
  - 2 vCPU Xeon or i7
  - 4 GB RAM
  - 250 GB data disk
- Small—Less than 100 devices or less than 100k flows/sec
  - 8 vCPU Xeon or i7
  - 16 GB RAM
  - 2 TB data disk
- Medium—100 to 500 devices or less than 200k flows/sec
  - 16 vCPU Xeon or i7
  - 32 GB RAM
  - 4 TB data disk

- Large—500 to 1,000 devices or greater than 200k flows/sec
  - 32 vCPU Xeon or i7
  - 32 GB RAM
  - 8 TB data disk
- Cisco NFVIS
  - UCS-E on ISR 4000
  - Native NFVIS support on other platforms

LiveAction
Simplify the Network