

Enterprise Agent

Product Brief

Service assurance for the modern enterprise

Digital transformation, whether it is migrating workloads to the cloud, connecting employees to software-as-a-service (SaaS) applications, adopting SD-WAN to improve performance, or managing a remote workforce, means you are starting to increasingly rely on external networks and services outside the traditional enterprise perimeter and your direct control. To assure flawless digital experiences, IT teams need visibility into the end-to-end delivery of services, from the user — no matter where they connect from, whether branch offices or remote — all the way to the internal applications hosted in the data center or cloud provider and external SaaS applications. As the internet, a best-effort and fragile network not initially built for enterprise communication, becomes the underlying fabric connecting users and applications, it is critical to understand how it can impact application performance and user experience.

With Cisco® ThousandEyes Enterprise Agents, you can gain insights into application performance from within your hybrid enterprise environment to proactively detect outages, quickly triangulate root cause, isolate fault domains, and escalate to the right service provider for resolution.

Vantage point within the enterprise

Enterprise Agents are software probes deployed within the enterprise network where users or application traffic originates — in data centers, branch offices, virtual private clouds (VPCs), and virtual networks (VNETs) — and measure application performance through a combination of active and passive monitoring techniques. They periodically monitor unidirectional and bidirectional network performance metrics such as loss, latency, jitter, and path topology through TCP and ICMP tests to service endpoints or another agent. Overlay application performance of DNS, web, and VoIP services with the underlying network to quickly determine the root cause of a problem. In addition to active monitoring, Enterprise Agents leverage Simple Network Management Protocol (SNMP) to discover and measure the health of internal network devices while automatically creating a topology map.

ThousandEyes Enterprise Agents deploy as:



Container
for Docker



VM for ESXi,
Oracle VirtualBox,
and Hyper-V



Linux package for
RHEL, CentOS,
and Ubuntu



Cisco Catalyst® 9300
and 9400 Series
Switches*, Cisco
Catalyst® 8300 and
8200 Series Edge
Platforms, Cisco 4000
Series Integrated Service
Routers (ISRs), and Cisco
Nexus 9500 and 9300
Series Switches†



Ubuntu-based AMI
through predefined
CloudFormation
templates for AWS



Installer for
Intel® NUC



Raspberry Pi 4
Model B

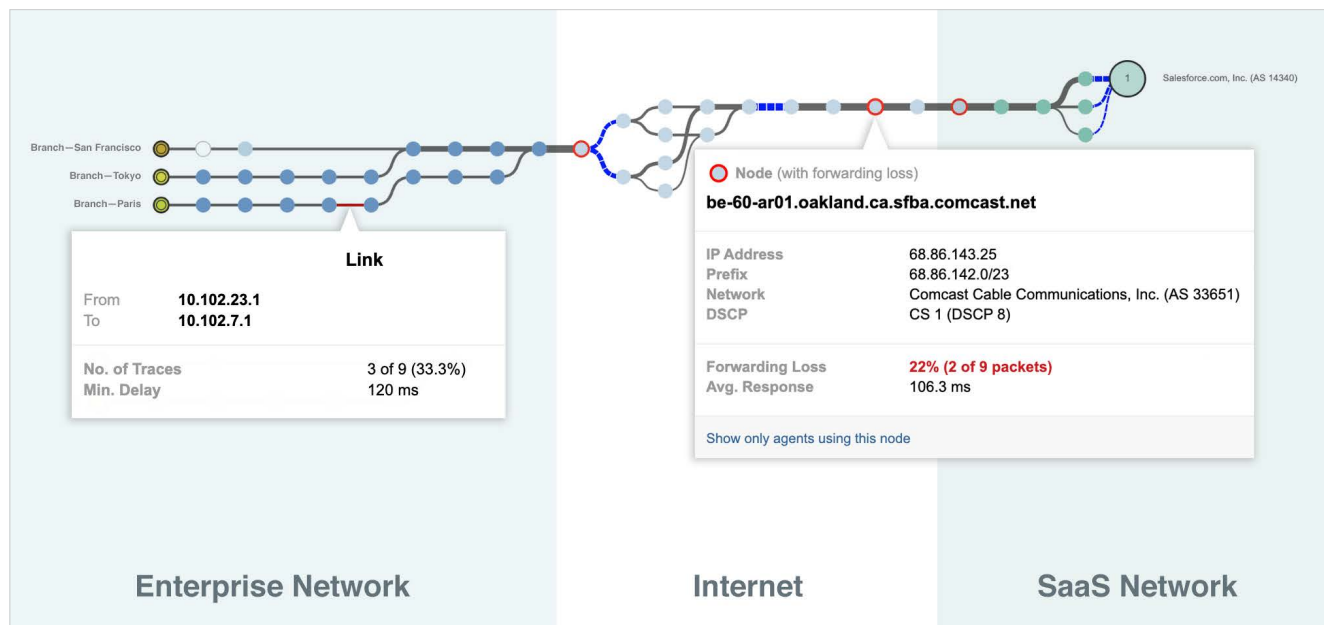
Requirements:

1 vCPU, 2 vCPUs for page load and transaction tests | 1 GB RAM, 2 GB for page load and transaction tests | 20-GB disk
Depending on the type of Enterprise Agent installation (virtual appliance, physical appliance, or Docker), some additional requirements must be met.

*Requires Cisco DNA Advantage or Premier software subscription

†Cisco Catalyst 8300/8200 Series Edge Platforms and Cisco 4000 Series Integrated Service Routers (ISRs), running IOS XE version 17.6.1 or newer; Cisco Catalyst 9300/9400 Series Switches, running IOS XE version 17.3.3 or newer; Cisco Nexus 9500/9300 Series Switches, running latest NX-OS 9.3 release or newer

Visualize performance from the enterprise (branch, data center, cloud) to any application over any network



Correlated intelligence into service delivery and performance

Correlated insights

ThousandEyes' patented cross-layer correlation technology visually and algorithmically correlates visibility across multiple layers — application, network, device, and internet routing — contextualizing application performance for quick and easy problem isolation and remediation, thereby accelerating mean time to resolution (MTTR).

Network path and performance

ThousandEyes Path Visualization visually maps end-to-end network paths from Enterprise Agents to service endpoints across any network — MPLS WANs, internet — including SD-WAN overlay and underlay tunnels. Enriched with reverse DNS and geolocation data per node, end-to-end, and per-hop network metrics, such as packet loss, latency and jitter, and quality-of-service (QoS) re-markings, Path Visualization provides granular insights into network performance.

Application performance

Monitor and validate web applications' usability and performance, including SaaS and internally hosted apps, through measuring page load times of individual web components or through scripted multistep transactions that replicate user interaction and validate API logic critical to application functionality. Monitor core enterprise services such as DNS or unified communications as a service (UcaaS) through SIP and RTP-based testing.

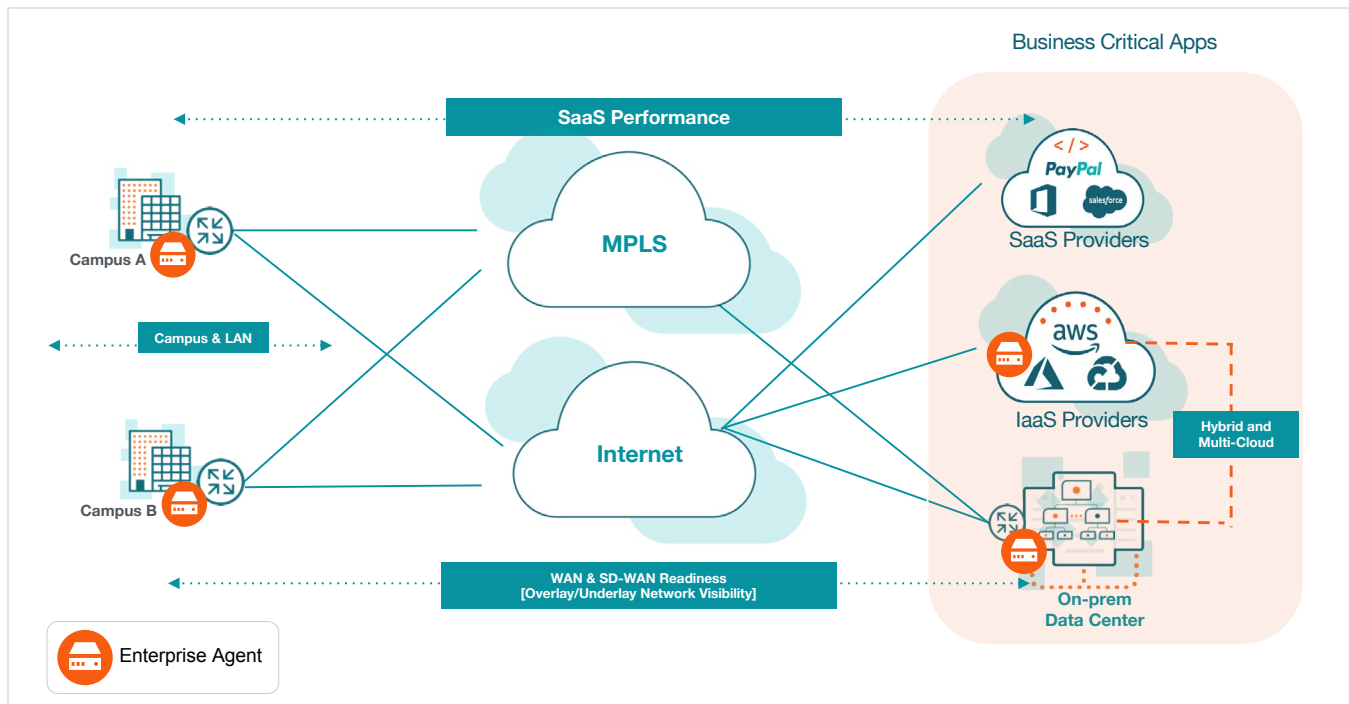
BGP routing

Critical for an enterprise ecosystem that relies on the internet, Border Gateway Protocol (BGP) monitoring tracks reachability and path changes for business-critical internal applications' prefixes and SaaS services and allows you to detect peering changes, route flapping, leaks, improper route insertions, and hijacks and their impact on application performance.

Device health

Enterprise Agents poll switches, routers, and firewalls via SNMP to collect device health data such as memory, CPU, and performance-impacting interface metrics. Visualize your Layer 2 network with customizable topology maps and auto-discovery of devices.

Enterprise Agents in the modern enterprise network



- **Campus and LAN:** Gain end-to-end visibility across devices, LAN, service providers, and service components such as DNS, DHCP, and cloud/SaaS networks.
- **SaaS performance:** Monitor availability and performance of business-critical SaaS applications such as Microsoft 365, Salesforce, Webex®, and more.
- **Hybrid and multicloud:** Monitor performance of on-ramp cloud connectivity between your data center and VPC, as well as inter-region and inter-availability zone (AZ) cloud network.
- **WAN and SD-WAN readiness:** Perform a premigration readiness audit, ISP evaluation, and application performance benchmarking, and gain visibility into the overlay and underlay network paths and performance.



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ABOUT THOUSANDEYES

ThousandEyes delivers visibility into digital experiences delivered over the Internet, so companies can deliver superior customer and employee app experiences, successfully adopt the cloud and deploy SD-WANs.

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