

Service Title

Full Stack Observability

Service Description

Cinos brings you Full Stack Observability powered by Cisco ThousandEyes, giving you real-time visibility into every factor that affects application and network performance. ThousandEyes continuously monitors the user journey across devices, networks, the internet, and cloud-based applications, presenting insights in simple, visual dashboards anyone can understand.

With this level of clarity, you can:

- Identify problems instantly - no more guessing whether the issue sits with your network, your provider, or the application itself.
- Reduce downtime and performance disruptions by quickly isolating and resolving root causes.
- Improve user and customer experience with proactive insights that keep services running smoothly.
- Optimise your digital environment using data-driven intelligence across the full application and network stack.

Cinos and ThousandEyes give you the confidence that every digital experience, internal or customer-facing, is performing exactly as it should.

Service Highlights

- Provides network intelligence and user digital experience with SaaS and PaaS applications.
- Designed and operated to meet the NCSC 14 Cloud Security Principles
- Disaster tolerant — housed in multiple Tier 3 data centres securely connected by high-bandwidth, low-latency dedicated connectivity enabling synchronous replication.
- Flexible connectivity options — connect via the Internet, Health, and Social Care Network (HSCN) or dedicated Ethernet & MPLS connectivity.
- A secure, highly available cloud hosted solution
- Enable monitoring of user's digital user experiences'.
- Rapid deployment
- Effective and scalable solution. Highly scalable and adaptable, adjust to fixable demand cost effectively.
- Employee Centric - accessible across the internet to provide application, enabling homeworking,
- All-in-one, all services are available through the same single interface and securely with out of the box integrated reporting, giving true end-to-end visibility of any citizen engagement. Reducing costs, improving service, and driving greater efficiency.

Service Features

Cisco Thousand Eyes is a comprehensive digital experience assurance platform designed to deliver in-depth visibility into various network environments, including the Internet, cloud services, and

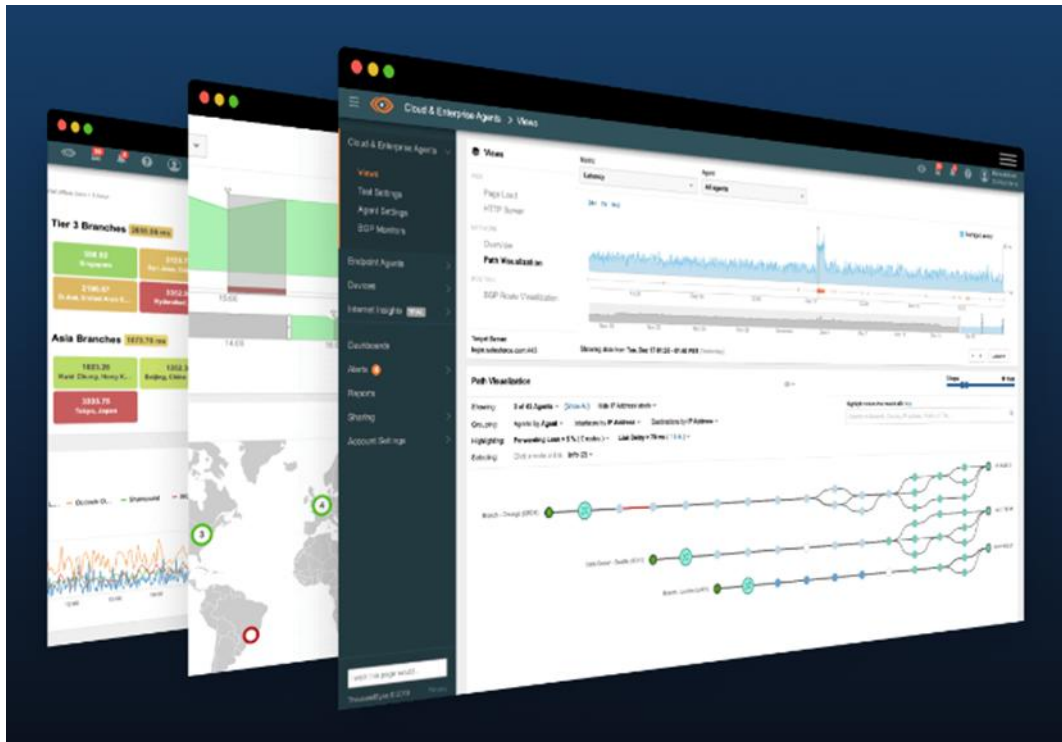


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Service Definition – Full Stack Observability

corporate networks. Thousand Eyes enables businesses to proactively monitor and troubleshoot performance issues across their own infrastructure as well as with external service providers, such as Internet Service Providers (ISPs) and Software as a Service (SaaS) vendors.

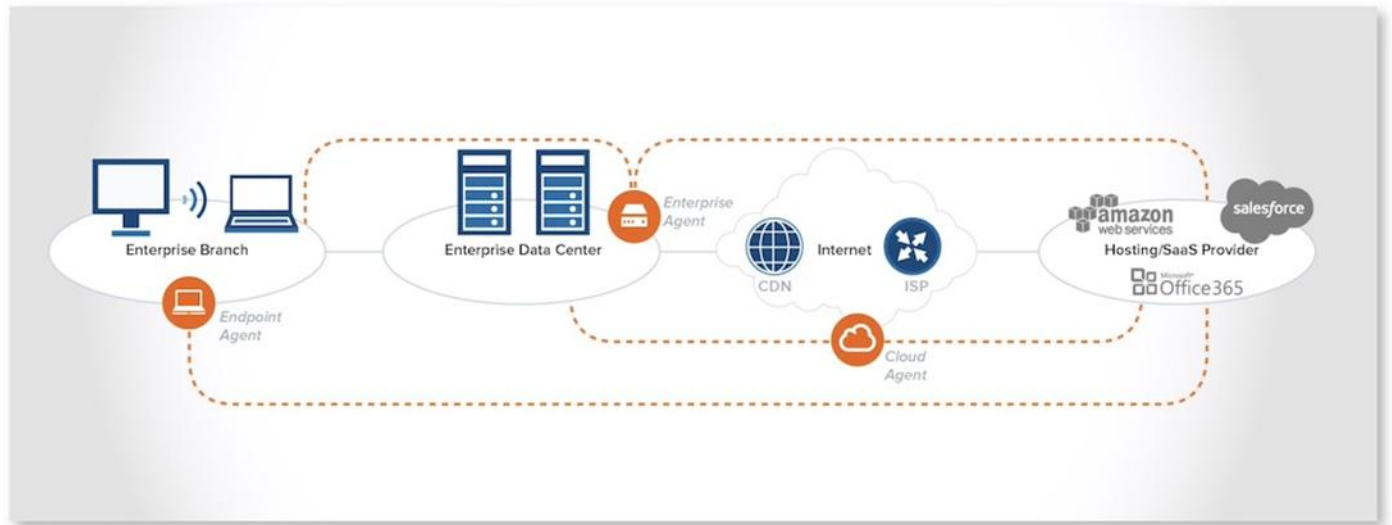
The platform offers detailed analytics and diagnostics to ensure optimal performance, reliability, and security of digital experiences, allowing customers to monitor the performance of clients and devices on the network and its connectivity.



The Thousand Eyes solution consists of a cloud monitoring platform, which utilises tests that will be performed by endpoint and enterprise agents deployed within the customer campus, data centre, and WAN networks to identify connectivity, issues or latency that may impact application performance. Thousand eyes agents allow customers to leverage regular end-user machines, servers, or network devices as extended test devices.

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Cinos Limited 4.9 Frimley 4 Business Park Frimley Surrey GU16 7SG
+44 (0) 203 880 2026 contact.us@cinost.net cinos.net



Agents

Cisco Thousand Eyes support the use of three different types of agents, these are known as endpoint agents, enterprise agents, and cloud agents.

Endpoint Agent

A lightweight application that can be installed on Windows or macOS machines. The agent collects network and application-layer performance statistics when users access specific websites that have been identified for monitored networks.

One advantage of Endpoint Agents over enterprise agents, they can be deployed on desktops and laptops to allow advanced monitoring regardless of the machine being on and off-premise. Deploying Endpoints gives you the ability to identify and diagnose end-user issues from the ingress point of the access layer in the network to the hosted application in near real time.

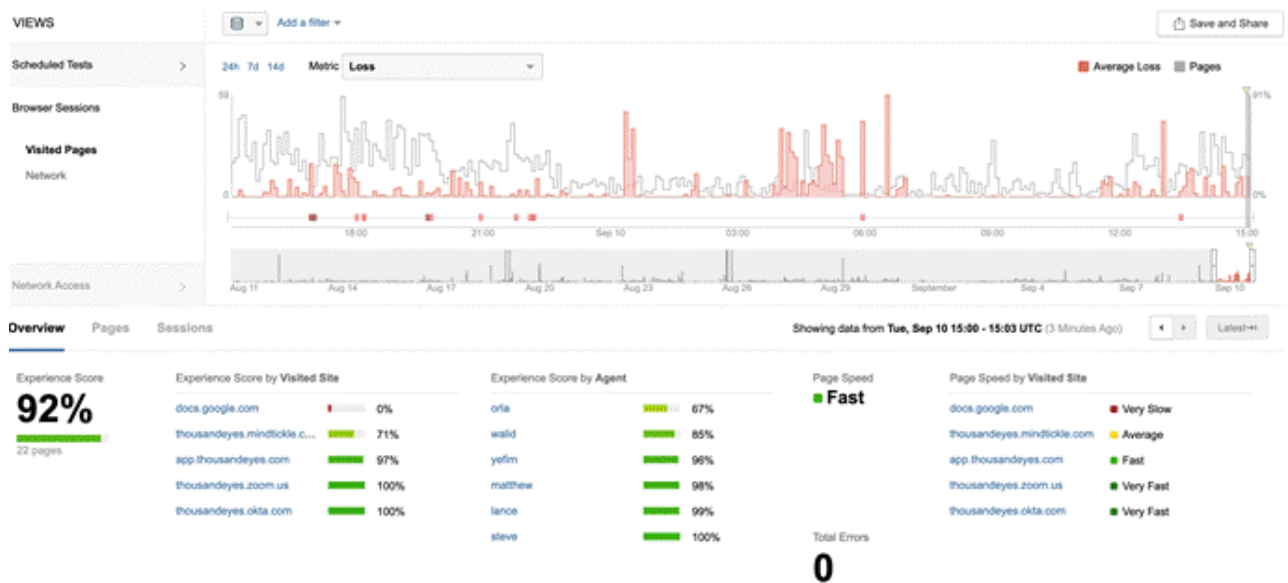
Endpoint Agents can be used for the following tests and will be responsible for measuring the application performance:

- **Scheduled Tests** - Scheduled tests run from Endpoint Agents at regularly scheduled intervals. These tests run without user interaction and can be deployed on Network (agent-to-server tests) and Web (HTTP server tests) layers.
- **Automated Session Tests** - Automated Session Tests are similar to Scheduled Tests but, in addition they allow you to configure an Endpoint Agent to dynamically create tests to IP addresses and ports it detects when an application opens a connection.
- **Browser Sessions** - Endpoint Agents record in-browser and network performance metrics whenever users navigate to monitored domains from monitored networks.

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- **Network Access** - This feature records the performance of the Endpoint's physical wired or wireless connections, gateways, VPNs, proxies, and DNS servers. The data and metrics collected are then displayed in one intuitive endpoint agents views page. The Views page separates the statistics into test features. To allow easier visibility of Scheduled Tests, Automated Session Tests, Browser Sessions, and Network Access data by layers. Each of the tests includes an interactive timeline that presents performance data that can be used to rapidly search through historical data. And to quickly identify problems and recurrence patterns of that incidence.



Cisco endpoint agent comes in two licence-level options, essentials, and advantage. Essentials and advantage offer exactly the same feature capabilities. Essentials allows you to run a maximum of four concurrent tests on an agent and retain the test data for 14 days. Whereas advantage allows you to run a maximum of ten concurrent tests on an agent and retain the test data for 30 days.

Enterprise Agents

These are virtual appliances that are deployed within a hypervisor environment or applications deployed within docker containers located on devices like Cisco Catalyst 9k series switches and perform specific reachability and simulation test.

Cloud Agents

Agents maintained by Thousand Eyes and distributed across 200+ cities globally for use by all customers.

Enterprise and Cloud Agents can be used for the following test and will be responsible for measuring the application performance:

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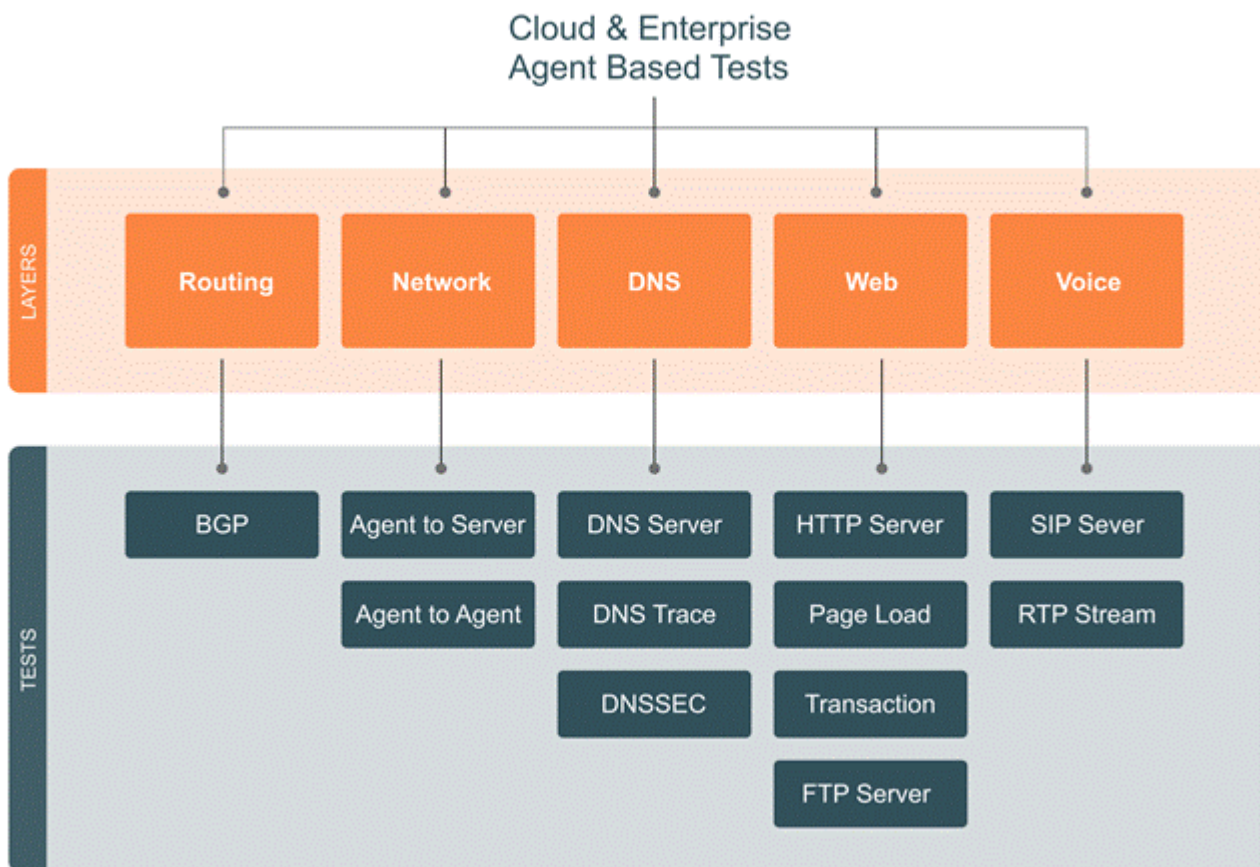
Network layer tests - These tests measure metrics like loss, latency, jitter, MTU, and path trace.

Routing layer tests - These tests measure metrics like routing path changes, reachability, and BGP updates.

DNS layer tests - These tests measure metrics like domain availability, resolution time, domain trace, and DNSSEC.

Web layer tests - These tests measure metrics like server availability, response time, throughput, redirects, response code, and page load performance.

Voice Layer tests - These tests measure SIP registration and RTP stream metrics.



FEATURE	BENEFIT
Highly available, resilient infrastructure	99.99% availability SLA with Cloud HA or Hybrid Cloud deployments
Pre-packaged models	Ease of procurement based the number of user and testes required.
Network Intelligence	Provides network intelligence and user digital experience with SaaS and PaaS applications
Device and location independence	Seamless usage regardless of the user's location
Standards-based	Standards-based Monitoring of application on or off network
High quality user experience	Improved user satisfaction and productivity, promoting adoption and utilisation.
Fully Managed Service	24x7 service monitoring and support from Cinos
Choice	Configure the solution that is right for you and your application with a range of service levels and packages
Geographic diversity	The platform spans two geographical regions in the US and one in Europe. And provides access to 1,057 cloud agents across 271 cities to enable geographical diversity of application monitoring.
Investment Protection	Business retains rights to licence rather than seat rental. Existing Cisco licencing may be used with our service.

Service Components

Cisco Thousand Eyes components are broken down into mandatory and optional elements. Mandatory items are required to perform tests. The optional elements allow endpoint agents to be used for testing and getting internet insights.

Cisco Thousand Eyes Agents are the data collection points that monitor network performance, application availability, and user experience. They provide visibility into your network, WAN, Internet, cloud services, and endpoints. Agents are deployed in three main categories: Cloud Agents, Enterprise Agents, and Endpoint Agents.

Cloud Agents

- Purpose: Monitor external networks, SaaS applications, and Internet paths.
- Deployment: Pre-deployed by Cisco across thousands of locations worldwide.
- Functionality:
 - Measure latency, packet loss, and jitter.
 - Monitor DNS resolution, HTTP/S transactions, and BGP routing.
 - Detect ISP or SaaS outages from independent vantage points.
- Use Cases: Test external SaaS performance (e.g., Microsoft 365, Salesforce) or monitor Internet connectivity globally.

Enterprise Agents

- Purpose: Monitor internal networks, private WANs, VPNs, and hybrid cloud paths.
- Deployment: Installed within corporate networks (physical or virtual) on servers, VMs, or appliances.
- Functionality:
 - Measure hop-by-hop network performance inside corporate WAN.
 - Monitor VPN connections, MPLS links, and private circuits.
 - Identify internal bottlenecks or misconfigurations.
- Use Cases: Validate branch-to-branch connectivity, SD-WAN performance, or hybrid cloud app delivery.

Endpoint Agents

- Purpose: Monitor real user experience from client devices.
- Deployment: Installed on employee laptops, desktops, or mobile devices.
- Functionality:
 - Capture metrics like page load time, application performance, and latency from the end-user perspective.

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- Detect issues affecting remote workers or branch office users.
- Use Cases: Troubleshoot user complaints, correlate network issues to actual experience, and monitor SaaS usage quality.

Thousand Eyes uses tests, which are active and passive monitoring probes that measure network performance, application availability, and digital experience. Tests are executed by Cloud Agents, Enterprise Agents, or Endpoint Agents, depending on the scope (external Internet, internal network, or user device). In Thousand Eyes, units which are typically consumable measurement resources are used to perform tests, depending on the type of test determines how units are required to be licenced.

ThousandEyes uses active and passive tests to collect performance data:

- Network Tests: Measure latency, packet loss, route changes, and jitter across any network segment.
- BGP Monitoring: Detect changes in Internet routing, prefix hijacks, and reachability issues.
- DNS Tests: Monitor resolution times, authoritative server responses, and caching issues.
- HTTP/S & Web Transaction Tests: Monitor SaaS, web apps, or APIs for uptime and responsiveness.
- Voice over IP (VoIP) Tests: Measure call quality, jitter, and packet loss for collaboration tools.
- Custom Application Monitoring: Track specific endpoints, ports, or protocols for enterprise applications.

Cisco Thousand Eyes Insights is an advanced network intelligence and digital experience analytics platform within the Thousand Eyes ecosystem. It leverages data collected by Cloud, Enterprise, and Endpoint Agents to provide end-to-end visibility, performance correlation, and root-cause analysis across enterprise networks, Internet paths, cloud services, and SaaS applications.

The Insights module uses AI and historical analytics to predict, detect, and remediate network and application issues proactively, transforming raw monitoring data into actionable intelligence for IT, NetOps, and SRE teams.

- Purpose: Detect widespread Internet, ISP, or SaaS outages globally.
- How it Works: Uses cloud agent data and machine learning to differentiate between local and global issues.
- Benefit: Prevents misdiagnosis and allows IT teams to know if problems are internal or external.

Professional Services and Training

The Professional Services required for the installation of this solution will be dependent on the Buyer's specific site requirements and existing infrastructure.

Professional Service & Training pricing is provided in the Price Document and required Professional Services to be confirmed at Call Off or during the contract by variation.

Support Options

Buyers are able to scale up and down the support of this solution, through the purchase of Cinos Support Tokens. This allows Buyers to enable an existing support provider to support the solution or have Cinos fully support the solution or something in-between or enhance regular incident support with event support.

Support tokens allow flexibility so that the Buyer can procure the appropriate volume of support for their specific needs. Required quantity of Support Tokens to be confirmed at Call Off or during the contract by variation.

Why Cinos?

Cinos is an industry-leading, agile, and innovative systems integrator. Our mission is to deliver integrated technology solutions to a global marketplace, driving digital transformation for organisations of all sizes.

Our expertise lies in providing comprehensive technology solutions that cover Collaboration, Connectivity, Networks, Security, Infrastructure, and Audio Visual. This unique combination enables us to offer true end-to-end solutions, setting us apart from other providers and giving our customers the confidence that their entire technology estate can work together seamlessly, managed by one trusted partner.

Whether that is an SME traversing the world of cloud communications for the first time or facilitating real-time collaborative decision making in highly complex command and control environments, Cinos is recognised as the go to partner for the delivery of seamless and reliable technology solutions.

We pride ourselves on the art of simplification, removing the burden of managing multiple technologies so our customers can focus on their strategic objectives. By employing a cross-architecture approach to technology integration, we empower organisations to embrace digital transformation, thereby streamlining efficiencies, fostering innovation, and enhancing their competitive edge.

We work with the leading manufacturers and technology providers to ensure the correct solution is identified, delivered, and maintained; enabling you and your customer base to work in a collaborative and more effective manner. Furthermore, our leading aftercare and managed services allow you to gain optimal performance and longevity from your technology investments.

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