

ANSWERX CLOUD & MANAGED SERVICES

Deliver fast and reliable recursive DNS with an OpEx-friendly cloud or managed service



KEY FEATURES

- Fully managed by Akamai's team of DNS experts with service-level agreements (SLAs)
- Operator portal for policy configuration and at-a-glance DNS monitoring
- Name Controls and Search Guide as optional value-add services
- High performance capable of 1 million DNS transactions per second
- Resilient clustered operation and rate limiting to drop unwanted traffic
- Carrier-hardened and proven, with over 10 years of AnswerX deployments

DNS has moved beyond its traditional role as the "Internet phone book" and is increasingly viewed by service providers as a strategic platform. AnswerX is Akamai's carrier-grade recursive DNS resolver that incorporates innovations that are designed to help lower network costs, make DNS a monetizable asset, and secure critical DNS infrastructure:

- Patented Smart Cache technology accelerates requests and responses to provide high-performance, low-latency DNS resolution for a better subscriber experience.
- Resilient high-speed architecture improves service availability running on standard hardware.
- Programmable services like parental controls and anti-malware use a powerful policy language with subscriber awareness.
- DNS over TLS encrypts query traffic between client stub resolvers and provider DNS resolvers for value-add use cases like trusted rDNS for public Wi-Fi, or security and personalization services that follow subscribers off-network.

AnswerX Cloud and Managed are service options designed for providers that want robust and responsive recursive DNS with premium service options while limiting operational expenses (OpEx). AnswerX Cloud runs on the Akamai Intelligent Edge Platform™, the world's premier distributed cloud services platform, for a better Quality of Experience. AnswerX Managed is a dedicated installation of AnswerX rDNS resolvers on a provider's premises, which is fully managed by Akamai. In both cases, Akamai operates the AnswerX rDNS resolvers while providers implement, maintain, and retain control over their own DNS policies and the services they enable. AnswerX Cloud and Managed include all of the AnswerX features described below, as well as:

- Service-level agreements (SLAs) that cover the full deployment
- Operator portal, which provides dashboard visibility into overall status and system health as well as statistics and reports related to DNS traffic and behavior
- Log data gathered from resolvers accessible with an API

These deployment models give providers the flexibility to deploy and use AnswerX in ways that best match their cost and operational needs. Key distinctions are summarized in the table below.

	DNSi AnswerX Cloud	DNSi AnswerX Managed
Deployment/Usage	Akamai deploys and operates AnswerX as a fully-outsourced cloud rDNS	Akamai deploys and operates AnswerX resolvers as a managed rDNS
Deployment Location	Akamai Intelligent Edge Platform	On-net, operator network
DNS Policy Ownership	Operator	Operator
DNS Capacity	Shared	Dedicated

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ANSWERX OVERVIEW

AnswerX Cloud and Managed have a rich feature set and an optional portfolio of value-add software options described in the next section.

- Carrier-grade recursive DNS is designed to address provider requirements for performance, capacity, and resiliency. AnswerX Cloud and Managed with Akamai support and services deliver cost savings, operational efficiency, and reliability that “free” rDNS solutions are challenged to match. They also enable value-add uses cases like trusted rDNS for public Wi-Fi, or white label rDNS that can be differentiated with security and personalization services.
- EDNS Client Subnet (ECS) maps the delivery of Internet content (web pages, video, software downloads, etc.) to CDN cache resources located close to the end user’s actual location, rather than the location of the AnswerX resolver, to minimize latency and download times and reduce network costs.
- Smart, subscriber-aware, policy-driven architecture processes DNS requests/responses at high speed according to preferences and network policies to block particular network connections. Settings can be modified on the fly without performance degradation or system restart.
- Dynamic policy controls can be centrally configured or derived automatically based on policy engine feedback. Each node shares data with other nodes in a meshed configuration for consistent system-wide functionality. Responses are also dynamic.
- Log data, including queries and responses and other information such as a timestamp, is accessible through an API to create end-user or operational reports. Log data can also be enriched with metadata, such as a policy that shaped a query response.
- Secure resiliency and protection enabled with redundant and distributed deployments ensures nonstop availability and fast response times. DNS rate limiting provides added resistance to DDoS attacks or large spikes in query traffic.
- Useful analytics are based on a Top-N query engine that allows operators to recognize Top-N destinations within a given time period, and a dashboard that displays cross-functional views of metrics that define DNS platform health.
- Akamai provides additional brandable cloud services that augment AnswerX and deliver 100% uptime with fast time to market, including an administrative portal for Name Controls, landing pages for Search Guide, or a walled garden for network notifications.

AnswerX Managed Security and Personalization Services (SPS) Software Options

SPS NAME CONTROLS FOR PARENTAL CONTROL

SPS Name Controls is a service that can be offered as a premium option for consumer or small-business Internet subscribers. It allows primary account owners, like a parent or owner of a small business, to control which content can be viewed by which end users within a home or workplace. Intuitive ratings categories are used to determine the types of websites allowed or disallowed. When a user attempts to navigate to a disallowed web resource, Name Controls presents a notification page with a PIN override should the subscriber opt to ignore the notification and view the content. Name Controls is also designed to prevent subscribers from visiting malicious websites that are known or suspected to host malware or are used to carry out phishing attacks that risk exposing personal information.

SPS NAME CONTROLS FOR MALWARE AND PHISHING PROTECTION

Malware and Phishing Protection is a subset of SPS Name Controls available as a stand-alone option for AnswerX Managed. It protects subscribers from domains that are known or suspected to host malware or are used to carry out phishing attacks. The AnswerX Reputation Knowledge Server (RKS) instantly disseminates threat intelligence generated by Akamai’s own Internet security research teams as well as the broader Internet security community. Real-time updates are applied to all AnswerX Cloud and Managed nodes so subscribers can use the Internet safely and securely.

SPS SEARCH GUIDE

SPS Search Guide simplifies and secures web navigation by suggesting likely domain names in cases of address-bar typos when web addresses are entered manually. It also includes DNS policy control, end-user landing experiences, and analytics and monitoring. With partner support, Search Guide can complement Name Controls to enable search that compensates for typos and name errors while creating safer search experiences.

