AnswerX Managed

OpEx-friendly, service-enabling recursive DNS solution for network operators and ISPs

DNS has moved beyond its traditional role as the "Internet Phonebook" and is increasingly viewed by Internet Service Providers (ISPs) and network operators as a strategic asset:

- DNS performance and resilience can affect Internet response times and service availability, key factors in determining end-user quality of experience

- ISPs can leverage recursive DNS (rDNS) as a control point for value-add services ranging from parental controls and anti-malware to services enabled through DNS analytics

- Existing DNS solutions provide good basic functionality, however technology advances are providing additional opportunities for ISPs and operators to benefit from DNS

These and other factors are causing operators and ISPs to "rethink" DNS, including the evaluation of deployment models that deliver the economic benefits of controlling DNS policy and traffic without the cost burdens associated with owning and operating an on-net DNS solution.

AnswerX Overview

AnswerX is Akamai's carrier-grade recursive DNS resolver that doubles as a highly flexible and extensible services platform. Featuring subscriber awareness, a high-performance policy engine and extensible language, a resilient architecture and the ability to process millions of transactions per second on standard hardware, AnswerX can help lower network costs and secure critical DNS infrastructure. AnswerX also makes DNS a monetizable asset by enhancing the end-user experience and enabling add-on service functionality through its portfolio of value-add software options.

As a way to provide the flexibility to deploy and use AnswerX in a way that best matches your cost and operational needs, Akamai offers a choice of AnswerX deployment models: Licensed, Managed, and Cloud. Key distinctions are summarized in the table below.

BENEFITS TO YOUR BUSINESS

- **Cost savings** from outsourcing servers, software deployment, and ongoing operations

- **Greater service differentiation** through leveraging capabilities of on-net DNS platform

- **Higher end-user satisfaction** with faster, safer, more reliable Internet experience and personalized controls

	AnswerX Licensed	AnswerX Managed	AnswerX Cloud
Usage Model	Operator owns, deploys, and operates AnswerX	Akamai deploys and operates AnswerX as a service	Akamai deploys and operates AnswerX as a service
Deployment Location	On-net, operator network	On-net, operator network	Akamai Intelligent Platform™
DNS Policy Ownership	Operator	Operator	Operator
DNS Capacity	Dedicated	Dedicated	Shared

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For operators and ISPs looking to leverage DNS to enhance Internet performance and offer premium service options while limiting operational expenses (OpEx), Akamai offers AnswerX Managed — an on-network, dedicated installation of Akamai's AnswerX rDNS resolver fully managed by Akamai. AnswerX Managed includes the same features and optional components as the licensed version of Akamai's leading rDNS solution AnswerX, with the following differences:

- With AnswerX Managed, Akamai fully operates and maintains the operator's rDNS while the ISP/operator implements, maintains, and retains control over its own DNS policies

- AnswerX Managed includes a Service Level Agreement (SLA) that covers the full deployment

- AnswerX Managed includes an operator portal, which provides dashboard visibility to overall status and system health as well as statistics and reports related to DNS traffic and behavior.
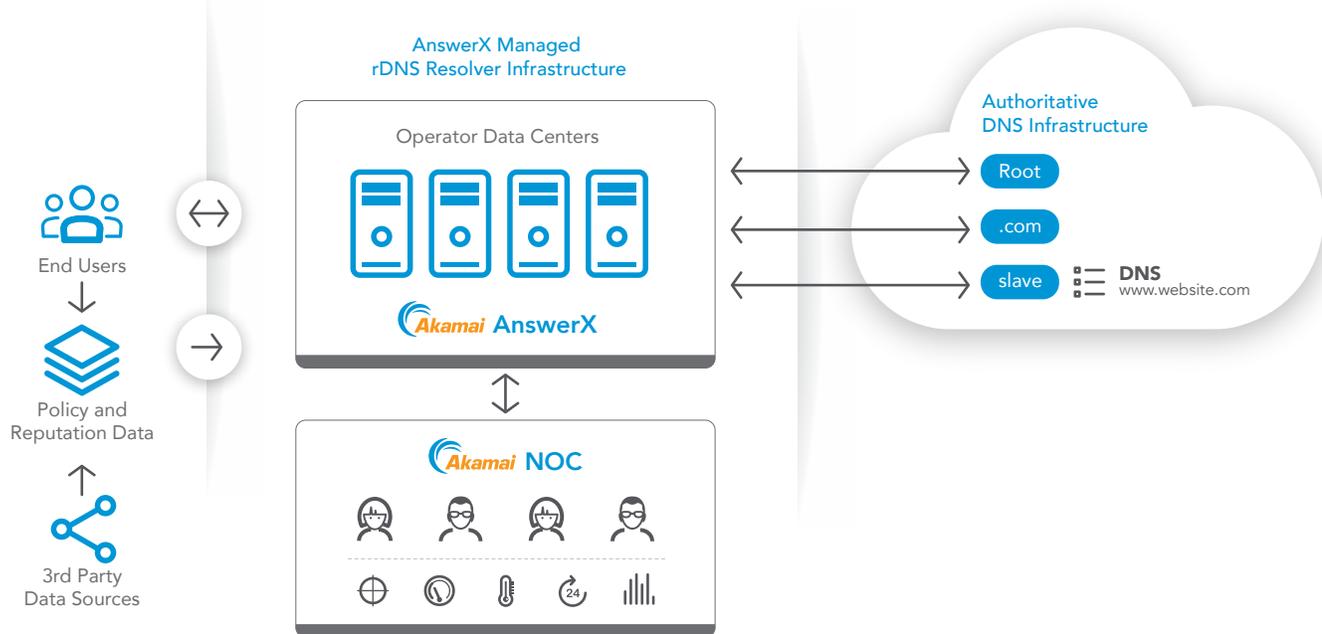
Akamai AnswerX Managed – On-net rDNS managed by Akamai experts

AnswerX Managed Value-Add Software Options

AnswerX Name Controls

AnswerX Name Controls allow primary account owners to control which content can be viewed by which end users within a location, a service that can be offered as a premium option for consumer or small-business Internet services. Intuitive ratings categories are used to determine the types of websites to allow or disallow. When a user attempts to view disallowed content, Name Controls presents a notification page and PIN override should the subscriber opt to ignore the notification and view the content. Name Controls is also designed to protect subscribers from unwanted visits to websites that risk exposing personal information.

AnswerX Protect

AnswerX Protect, a subset of Name Controls that is available as a standalone option for AnswerX Managed, protects end users from domains that are known or suspected to host malware or are used to carry out phishing attacks. By partnering closely both with Akamai's own Internet security team as well as the broader Internet security community, real-time updates are applied to the AnswerX RKS and instantly disseminated to all AnswerX Managed service nodes, enabling your end-users to safely and securely use the Internet.

AnswerX Search Guide

AnswerX Search Guide allows DNS to become the foundation for a premium service simply by providing search flexibility and subscriber choice. Using relevant search experience and suggestions, Search Guide simplifies and secures web navigation, even in cases of address-bar typos or manually entered web addresses. It also includes DNS policy control, end-user landing experiences, and analytics and monitoring. With partner support, Search Guide can also complement Name Controls to enable search that compensates for typos and name errors while creating safer search experiences.

AnswerX AnalytX

AnswerX AnalytX is a powerful data-collection engine and usage monitor that enables operators to capture and visualize information from DNS activity to gain real-time and historical intelligence about security trends and attacks as well as growth trends and web performance. With a flexible implementation model and visualization tools, AnalytX adapts to existing network environments, providing an effective means for operators to leverage valuable DNS data, whether to enforce acceptable use policies, rapidly identify security threats, or gain additional insight into Internet usage.

AnswerX Managed

AnswerX Managed Feature/Functionality

- **Carrier-Grade Recursive DNS –** AnswerX was designed from the start to meet operator standards for performance, capacity, and resiliency. With support and services from Akamai, AnswerX Managed delivers superb value to operators—in the form of cost savings, operational efficiency, and reliability—that "free" rDNS solutions cannot match.

- **ECS for Optimum Performance –** AnswerX supports the EDNS0 Client Subnet (ECS) extension, which maps the delivery of Internet content (web pages, video, software downloads, etc.) to CDN cache resources located closest to the end user's actual location, rather than the location of the AnswerX server, resulting in significant decreases in latency and download times.

- **Smart, subscriber-aware, preference-driven –** AnswerX processes DNS requests/responses at high speed according to preferences and network policies to block particular network connections. These dynamic settings can be modified without performance degradation or system restart.

- **Dynamic policy controls –** AnswerX 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.

- **Secure Resiliency and Protection –** AnswerX Managed is deployed in a redundant and distributed fashion designed to ensure non-stop availability and fast response times. DNS rate limiting provides added resistance to DDoS attacks, whether malicious or accidental, fortifying the AnswerX Managed platform.

- **Useful Analytics –** AnswerX features a TopN query engine that allows operators to recognize top N destinations within a given time period and a dashboard that allows cross-functional views of metrics that define DNS platform health.

- **Cloud Services –** Whether an administrative portal for Name Controls, a landing page for Search Guide, or a walled garden for network notifications, Akamai provides turnkey brandable cloud services that augment Answer X to deliver 100% uptime and fast time to market.

The Akamai AnswerX Managed Solution

Akamai makes the Internet fast, reliable, and secure and has relationships with hundreds of network operators to optimize the delivery of Internet services to subscribers. AnswerX Managed offers the features and capabilities of AnswerX in an OpEx-friendly, DNS-as-a-Service form factor designed to helps ISPs/operators leverage their rDNS platform to quickly deploy new services and make existing services faster, safer, and more reliable.

Solution highlights include:

- Fully managed by Akamai's team of DNS experts, including Service Level Agreements (SLA)

- AnswerX operator portal for policy configuration and at-a-glance DNS monitoring

- Value-add services – Name Controls, Search Guide, AnalytX

- Performance – proven to handle over 300 billion DNS requests daily, capable of 1 million DNS transactions per second

- Resiliency – clustered operation and rate limiting to drop unwanted network traffic

- Extensibility and programmability – quickly deploy new services or updates

- Instantaneous, automatic dissemination of policy updates to all service nodes

- Uniquely and specifically engineered for network operators and Internet service providers

- Carrier-hardened and proven, with over 10 years of live AnswerX deployments

The Akamai Ecosystem

Akamai makes the Internet fast, reliable and secure. Our comprehensive solutions are built on the globally distributed Akamai Intelligent Platform, managed through the unified, customizable Luna Control Center for visibility and control, and supported by Professional Services experts who get you up and running easily and inspire innovation as your strategies evolve.