AnswerX Cloud

Enhance service performance and user experience through Akamai's best-in-class recursive DNS

The Internet's Domain Name System (DNS) is an essential and ubiquitous set of functions that affects most Internet communications, yet not all DNS implementations are created equal. The DNS platform used by your subscribers can significantly impact the overall quality of their Internet experiences as well as your competitive position. As DNS takes on a more strategic role in your overall infrastructure strategy, certain factors may affect your choices:

- Cost – It's possible for your service to feature best-of-breed DNS without your having to invest in new DNS infrastructure or operations
- DNS performance and availability – These can affect Internet response times and general service availability, impacting real or perceived end-user quality of experience
- Value-add – Recursive DNS (rDNS) provides a valuable control point for service enhancements such as parental controls and malware detection and prevention

These factors and others are causing operators and ISPs to "rethink DNS," including the evaluation of alternate deployment models that deliver the economic benefits of high performance, service-enabling DNS 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
- **Maximum service availability** from leveraging AnswerX Cloud for DNS disaster recovery
- **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 seeking to completely outsource DNS infrastructure but still deliver premium levels of Internet performance and reliability as well as service differentiation, AnswerX Cloud from Akamai is the right solution. AnswerX Cloud is Akamai's global recursive DNS deployment, offered as a fully managed service to network operators and Internet Service Providers (ISPs). With AnswerX Cloud, the network operator directs subscriber DNS queries to AnswerX resolvers located within the Akamai Intelligent Network™, the world's premier distributed cloud services platform. AnswerX Cloud offers high-speed name resolution and highly accurate end-user mapping to ensure rapid delivery of Internet content, particularly when enabled through CDN services such as Akamai's Media Delivery or Web Performance solutions.

AnswerX Cloud also makes an excellent disaster recovery solution for operators who have existing on-net DNS infrastructure but realize that a DNS outage — regardless of cause — could carry serious consequences in terms of customer satisfaction and its own reputation as a service provider. With AnswerX Cloud for disaster recovery, should a primary DNS outage occur, Internet communications would continue uninterrupted, with DNS queries redirected to the AnswerX Cloud platform.
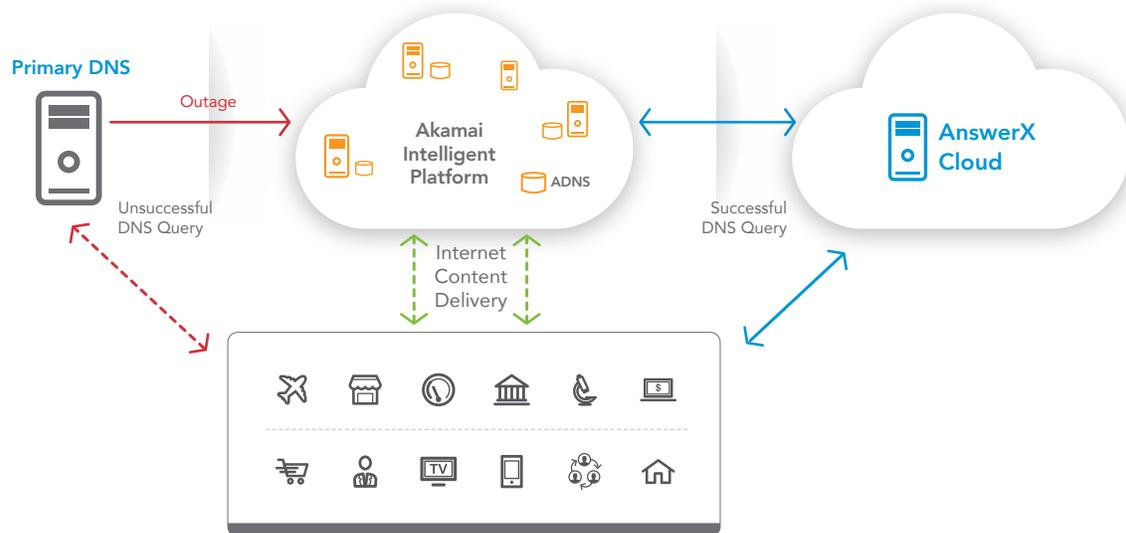
AnswerX Cloud for Disaster Recovery

AnswerX Cloud 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 Cloud, 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 Cloud service nodes, enabling your end-users to safely and securely use the Internet.

Akamai provides turnkey brandable administrative portals and landing pages for AnswerX Name Controls and Protect as well as "walled garden" pages that can be used to notify end users about blocked web sites, potential malware exposure, and other threats.

AnswerX Cloud 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 Cloud delivers superb value to operators—in the form of cost savings, operational efficiency, and reliability—that "free" rDNS solutions cannot match.

- **Global Footprint –** The AnswerX Cloud footprint extends to major countries in North America, Europe, and Asia. AnswerX servers are deployed in locations where other Akamai servers are deployed, with the goal of providing close proximity to end users.

- **ECS for Optimized Performance –** AnswerX Cloud 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 Cloud processes DNS requests/responses at high speed according to preferences and network policies. These dynamic settings can be modified without performance degradation or system restart.

AnswerX Cloud

- **Dynamic policy controls –** Policy controls for AnswerX Cloud are configured by the operator via Akamai's Luna Control Center, a web-based portal that offers operators full, private access and the capability to securely manage and control end-users' DNS traffic.

- **Secure Resiliency and Protection –** AnswerX Cloud 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 Cloud 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.

- **On-Demand Onboarding –** Because AnswerX Cloud is offered as a service that leverages an already deployed rDNS platform, the onboarding process for AnswerX Cloud can be dramatically reduced and simplified.

- **Web App Manager –** To assist with the enablement of services based on AnswerX Name Controls, Akamai offers the AnswerX Web App Manager, a customizable platform for service providers to enable network-based parental controls or similar content-blocking services

The Akamai AnswerX Cloud 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 Cloud offers the features and capabilities of AnswerX in an economical DNS-as-a-Service form factor designed for ISPs/operators seeing to outsource both DNS hardware and software. Solution highlights include:

- Fully deployed platform managed by Akamai, fast onboarding, and global reach
- AnswerX portal for policy configuration and at-a-glance DNS monitoring
- Value-add services – AnswerX Name Controls, AnswerX Protect
- Performance – proven to handle over 300 billion DNS requests daily, capable of 1 million DNS transactions per second
- Resilience – clustered operation and rate limiting to drop unwanted network traffic
- Carrier-hardened and proven — 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.