Vantio™ AuthServe

Vantio AuthServe is an authoritative DNS server that delivers highly resilient, secure, always-on name services. Unlike multi-purpose DNS servers, Vantio AuthServe is designed and optimized specifically for the authoritative function with a purpose-built database that delivers performance and scaling unmatched in the industry. Proven management features readily support the most complex environments while minimizing operational overhead. A unique Vantio AuthServe capability, composite zones, greatly reduces the load on network resources such as mail gateways doing anti-spam checks and simplifies client software by combining DNS data from many zones into one, which is searched with one DNS query. Vantio AuthServe also automates lifecycle management of DNSSEC, making deployment as simple as managing unsigned DNS data.

Performance and Scaling

Vantio AuthServe performance and scalability exceeds dual-purpose name servers with a unique in-memory Versioned Database (VDB) that makes data instantly available for queries and automatically recovers with near instantaneous restart if server hardware fails. This purpose-built database makes extremely efficient use of memory so more records can be stored on any given host – scaling to a billion records - well beyond every other nameserver available. Superior design also allows Vantio AuthServe to support high DDNS update rates reliably.

Resilient and Secure Operations

Always-on operation results from hardened Vantio AuthServe engines that can be updated without service interruption or downtime, maintaining continuous and consistent service levels. Vantio AuthServe has also never been cited in a security advisory and shares no known vulnerabilities with open source software. Unlike other DNS engines that handle queries linearly, Vantio AuthServe algorithms monitor and manage system resources under both normal and extreme load conditions to deliver consistent performance. DDoS attacks or virus/worm replication are absorbed without failure and memory and CPU consumption remain low, even under intense loads.

Multimastering

Multimastering support in Vantio AuthServe allows two active authoritative name servers to serve as masters for the same zone. When an update is applied to one master it is rapidly and automatically applied on the other master server. As with existing master servers, multimastered servers can have multiple slave servers.

Streamline Operations

Vantio AuthServe's built-in commands and tools simplify name server data management, ongoing operations, planning, and provisioning.

- Zone templates make configuration and ongoing maintenance of zone data simple
- Versioning journals *all* incremental name server changes, simplifying updates or rollbacks to prior configurations
- Command Line Interface supports real-time configuration and updates without service interruption
- Real time updates provide deep visibility into DNS operations
- Detailed reports covering zones and views simplify name server maintenance and configuration
- Split DNS views segment resources for different communities, such as internal and external users

Composite Zones

Composite zones are a unique Vantio AuthServe capability that provides a transparent way to combine DNS data, which may be owned and managed by separate parties, into a single zone that can be searched with a single DNS request. This greatly reduces the load on network resources that query the composite zone, such as mail gateways doing anti-spam checks.

Always on Internet presence

Composite zones also significantly reduce the complexity of client software by reducing the need for clients to be policy aware. Source zones that make up a composite zone are called components. Each component zone is a complete zone and either a master zone, slave zone, or alias of a master or slave zone. Components are transferred into composite zones using standard AXFR and IXFR protocols - no changes are needed by operators who own domains being transferred.

Real Time Visibility

As with other Vantio engines, Vantio AuthServe leverages Real Time Visibility (RTV) to log DNS data in real time based on configurable filters. Detailed statistics can be collected with no performance impact on the nameserver. Additional tools aggregate and upload data for subsequent analytics on other systems.

Complete Automation of DNSSEC

DNSSEC cryptographically protects DNS data so it cannot be compromised as it transits the Internet. DNSSEC also introduces additional complexity, and improper configuration results in domains simply disappearing from the Internet – unacceptable for brand owners. Complete DNSSEC lifecycle management in Vantio AuthServe addresses this problem by completely automating and integrating everything needed for deployment. This eliminates errors that create floods of support calls as well as the need for scarce operational resources.

Vantio AuthServe signing is multithreaded so one core answers queries while other cores sign. Queries are always answered with high performance and predictable latency and signing gets additional computing horsepower. Signed DNS data is also 8 to 10 times larger than unsigned data and the Vantio AuthServe purpose-built database makes extremely efficient use of memory and multiprocessor hardware so it scales and performs better than alternatives.

Vantio AuthServe supports online and offline signing to eliminate signing appliances. Online signing occurs “on the fly” - a single authoritative server answers queries and signs DNS data (including DDNS). Offline signing occurs on an external server running a subset of Vantio AuthServe and signed data is transferred to servers that answer queries.