SECURE64™

Secure64® ENUM™

A secure, scalable ENUM for modern IP core networks

DATA SHEET

Secure64 ENUM

KEY BENEFITS

- Simplifies provisioning
- Supports rapid subscriber growth
- Promotes excellent subscriber experience
- Ensures 99.999% uptime
- Preserves investment in legacy systems

KEY FEATURES

- Multi-site provisioning and data replication
- High availability architecture
- Scalable to hundreds of millions of subscribers
- High performance and low latency
- Secure, carrier grade DNS
- Fully RFC and 5G standards compliant

COMPONENTS

- ProVision™
- Secure64 DNS Authority™
- Secure64 DNS Cache™
- Secure64 DNS Manager™

ENUM is a critical component of your IP Multimedia Subsystem (IMS) architecture, directly impacting call performance and your end customer experience. Poor performance or system failure means failed calls and lost customers, so it is essential that your ENUM solution integrates seamlessly into the IMS in a scalable, reliable, and futureproof way.

Secure64 ENUM is an NFV-ready solution built to handle the demands of even the largest virtualized IP core networks. Based on a high-performance DNS, our ENUM solution easily provisions and serves ENUM records for hundreds of millions of subscribers while running as virtual machines on commodity hardware. Multi-site provisioning spreads the record provisioning load over multiple servers while fast data replication ensures that changes are propagated quickly.

"Use of ISC BIND is fine for services which do not necessarily have a large data-fil (for example: GPRS, MMS) but for services such as ENUM where the data-fil can run into thousands, if not millions of resource records, a commercial DNS Nameserver product should be used."
–GSMA IR.67

With technology that can potentially impact your customers, failure is not an option. For that reason, our ENUM solution is designed to be fully redundant, with all components deployed in high availability architectures that automatically failover in the event of a component failure.

Secure64 ENUM embraces the past while looking to the future. Fully 5G and IETF RFC standards compliant, Secure64 ENUM is compatible with legacy systems from many incumbent vendors while supporting the more demanding architectures mandated by 5G. A RESTful API simplifies integration into existing numbering systems while also supporting third party management and orchestration systems.

Technical Information

Subscriber Provisioning

RESTful API

The Secure64 ENUM provisioning system provides a RESTful API for adding, modifying or deleting records from the database, simplifying integration into upstream numbering databases. Newly provisioned records are quickly propagated to authoritative DNS servers in the network through dynamic DNS updates or incremental zone transfers.

Distributed Provisioning

The ENUM provisioning system can be deployed in a multi-node architecture with each node able to write to a distributed back end database. Records provisioned through one node are visible to all nodes through database replication. This architecture allows the provisioning load to be spread across multiple servers, reducing bottlenecks and increasing overall system resiliency.

Data Import

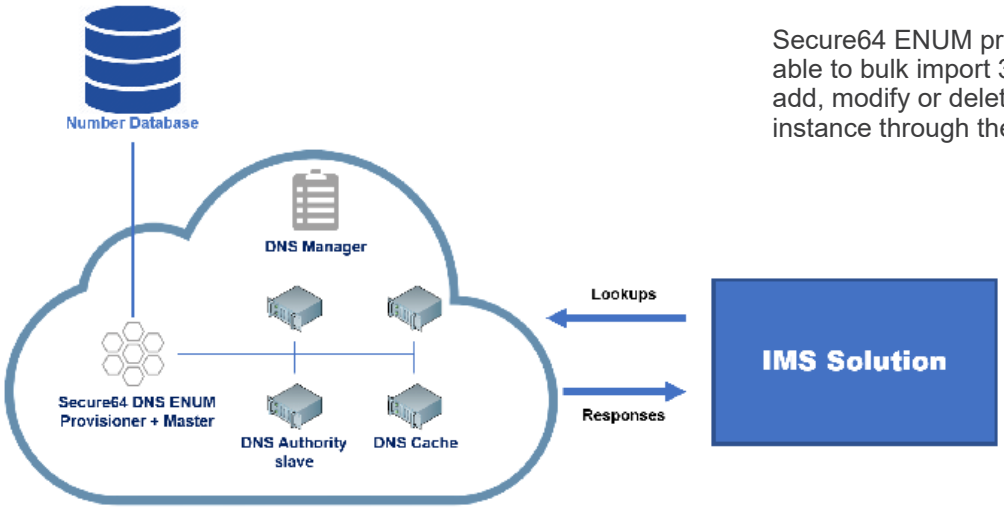
Existing ENUM or other DNS records can be quickly imported into the ENUM provisioning system through a CSV file.

Simple GUI

ENUM records can be viewed, added, modified or deleted through a simple GUI that allows network engineering and operational personnel to easily maintain and troubleshoot ENUM provisioning issues.

Standards Support

The Secure64 ENUM solution, which is built upon Secure64's carrier-grade DNS products, supports all records mandated by applicable GSMA and 3GPP standards, including A, AAAA, NAPTR, and SRV, and fully supports the Dynamic Delegation Discovery System, which is foundational technology for 5G networks.



Number Portability

If an E164 number cannot be found in the ENUM database, the ENUM solution can be configured to automatically query a number portability system and return that answer if found.

High Availability

Each component of the Secure64 ENUM solution can be deployed in a high availability architecture with automatic failover, so there is no single point of failure in any component either within a site or across sites.

Security

The Secure64 ENUM solution is based on SecureOS, a hardened Linux distribution with a secure kernel augmented with integrated DDoS defenses, group-based authorization, and other security features needed in carrier-grade systems.

Form Factor

All Secure64 ENUM solution components can be deployed either as bare metal servers or in an NFV configuration for scale-up and scale-out on KVM/Openstack, VMware, HP Helion and other VNF platforms.

Management Dashboard

Secure64 DNS Manager provides a graphical user interface to configure, monitor, control, report and alarm. KPIs may be graphed and used to generate history reports. DNS Manager also acts as an element management system to pass alarms and KPIs to higher cloud management systems in an NFV configuration.

Performance

Secure64 ENUM provides industry-leading performance – it is able to bulk import 3,000 records/second and can dynamically add, modify or delete 1,000 records/second per provisioning instance through the RESTful API.

Learn more about Secure64 DNS solutions at www.secure64.com

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