Nokia VitalQIP

Next Generation IPv4/IPv6 address management platform

NOKIA

Nokia VitalQIP® is a proven, open and scalable domain name system (DNS), Dynamic Host Configuration Protocol (DHCP) and IP address management (DDI) solution with high-performance and feature-rich next-generation capabilities for enterprises and service providers. It streamlines management and reduces administrative costs as you configure, automate, integrate and administer DDI services across your entire IP network.

VitalQIP enables unified planning and administration of IPv4 and IPv6 address spaces, which reduces infrastructure support costs and improves the accuracy of an organization's IP address inventory, while maximizing DNS and DHCP service availability.

The efficiency and flexibility of this next-generation IP address managementplatform support the growing demands of businesses and networks.

Award-winning DDI software

As your network continues to grow, your management responsibilities increase. You must cope with more IP devices, more traffic and newer technologies and initiatives such as clouds, Bring Your Own Device (BYOD), Internet of Things (IoT) and IPv6. DNS and DHCP network services can be considered cornerstones of the Internet and businesses globally, and both are part of the industry-standard TCP/IP suite of network protocols, which underpin modern IP network operation. It is easy to forget these services even exist today, but without reliable DNS service organizations and their entire global business operations can grind to a halt.

Attacks via Distributed Denial of Service (DDoS) utilizing DNS as an attack vector are commonplace and can take an organization's web presence off-line, which can cost hundreds of thousands of dollars per hour. Also, without a reliable DHCP service providing IP addresses to devices, they would be unable to communicate.

The industry-leading VitalQIP solution goes beyond traditional IP address management software by enhancing the overall user experience and allowing you to leverage sophisticated features. Advanced capabilities include fully integrated support of IPv4 and IPv6 address plans, an intuitive web-based GUI, IP infrastructure inventory capabilities with extensible metadata, a standards-based SOAP/XML API for tight integration, extensive CLIs, enhanced audit and report functions, host discovery capabilities, and carrier-grade high-performance DNS and DHCP services.

The Nokia award-winning VitalQIP software is used today by more than 450 customers worldwide, including 40% percent of Forbes top 100 companies. Some of its numerous features and benefits are summarized in Table 1.

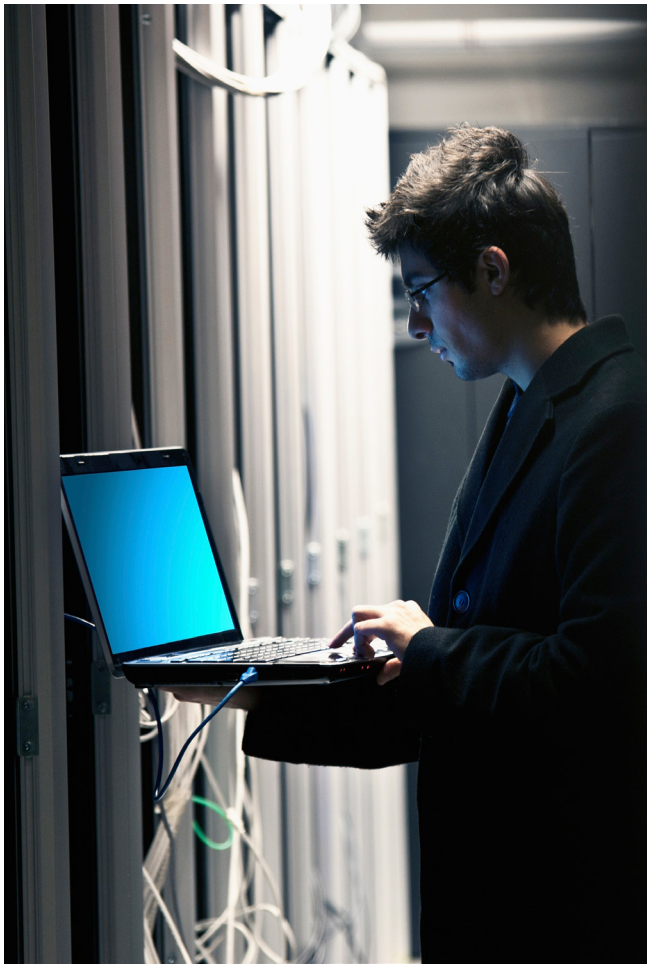


Table 1. Features and benefits of VitalQIP

Feature	Benefit
Multivendor, multiplatform compatibility with optional physical or virtual appliances	Protects investment and allows cost-effective growth
High-performance, multi-threaded DHCP and DNS services	Provides rapid, resilient IP address assignment and name services
Multi-tenancy support	Allows management of millions of IP addresses and multiple tenants in a single deployment
High-availability architecture	Minimizes downtime and maximizes user satisfaction
Flexible administration	Offers a secure infrastructure and extensive auditing capabilities, and reduces the complexity of managing IPv4 and IPv6 address spaces
Consolidated IP inventory	Enables network-wide consistency and accuracy of management data
Extendible and open architecture	Rapidly integrates with company initiatives such as private/hybrid clouds, virtualization, BYOD and IoT

Enhance administrator effectiveness

The most effective way to define an IP addressing plan and manage IP address usage is to use a single centralized system. This approach helps administrators improve productivity and reduce errors when configuring IP, DHCP and DNS services.

Nokia VitalQIP software allows network administrators to centrally establish rules and policies that automate the definition of IP networks and subnets, and define administrators' visibility into everything from IP networks and subnets to individual IP objects, domains and DNS and DHCP servers. VitalQIP also allows its entire IP infrastructure to be extended with company-specific metadata via its extensive user-defined attributes functionality.

These capabilities promote consistent, network-wide enforcement of operational and administrative procedures. In addition, a global search capability allows users to find data they need across multiple infrastructure types, while the intuitive web-based GUI saves time and effort with fast performance and simplified work flows.

Infrastructure access within VitalQIP can be secured and segregated with extensive user access permission and roles, and VitalQIP is able to support multiple tenants in a single deployment.

All actions in VitalQIP produce a full audit trail with integrated functionality to easily view, search and report on changes made by administrators. Infrastructure and IP lease audit trails allow administrators to easily answer the simple question of "Who did what and when?" across the IP infrastructure within VitalQIP.

Fast and feature-rich DHCP and DNS services

Today's complex networks demand a fast and powerful DHCP service that is quick to deploy, easy to manage and guaranteed to perform. Nokia DHCPv4 and DHCPv6 services are multi-threaded, carrier-grade DHCP implementations that put the customer in control with resilient DHCP failover technology and extensible functionality with API access. Every DHCP IP address lease provided by Nokia DHCP servers is centrally stored and historically auditable within VitalQIP's web-based GUI.

DNS service underpins the operation of the Internet itself and organizations using it. The Nokia DNS service is based on the open-source BIND DNS reference implementation and has been enhanced by Nokia for today's organizational demands.

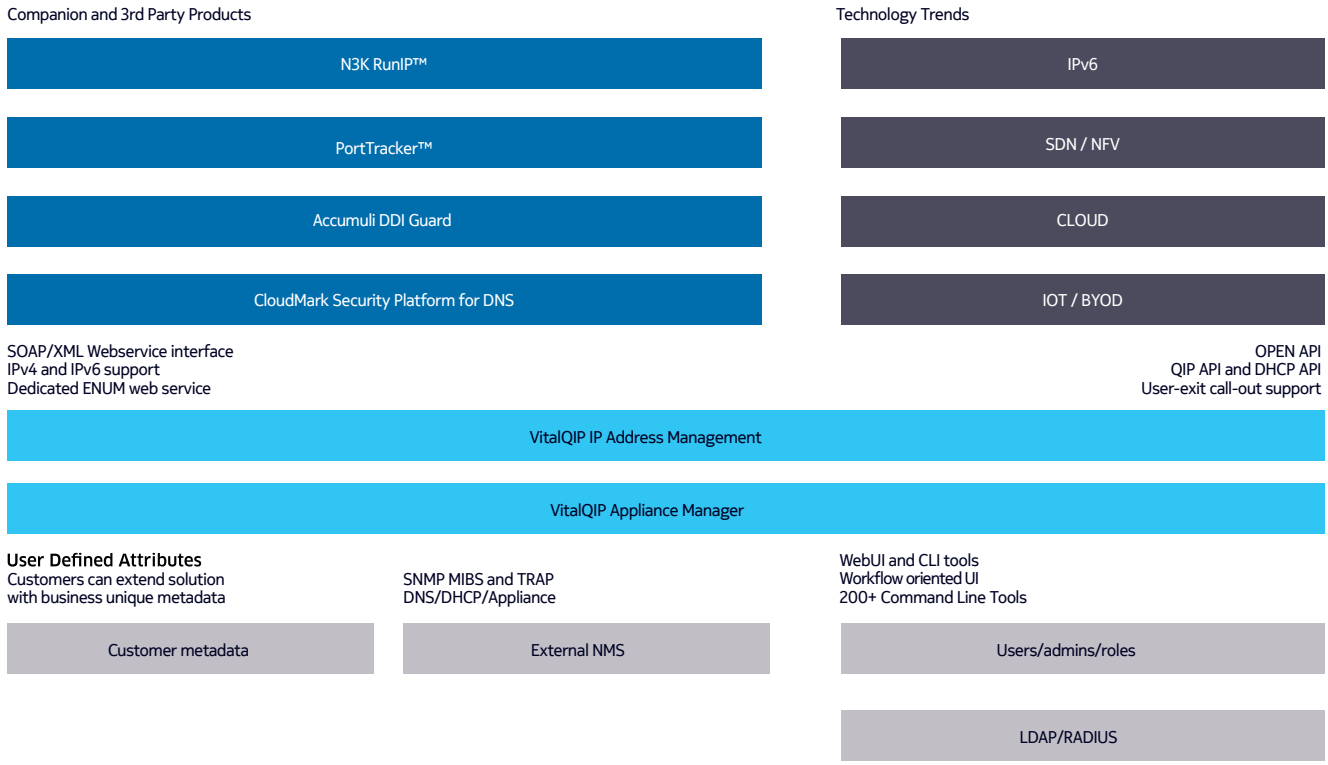
Nokia DNS and DHCP services are included with the VitalQIP IP address management solution.

Architecture

VitalQIP is an open solution (Figure 1) allowing for easy integration with company initiatives such as private clouds, virtualization, BYOD and IoT. By leveraging open APIs, a published database schema, extensive SOAP/XML web-service and a CLI toolkit, VitalQIP allows for rapid integration, fast service deployment times and IT agility in step with other company IT initiatives.

The optional VitalQIP Appliance solution supports physical and virtual appliances for increased reliability, manageability, scalability and security, and is the only appliance solution on the market that seamlessly integrates with VitalQIP.

Figure 1. VitalQIP open architecture



The Nokia and VitalQIP Advantage

Nokia is a proven global provider of market-leading customer experience and network operation solutions. Leveraging innovations from Bell Labs, these solutions are designed to maximize profitability and productivity, increase return on your investment and enhance your competitive advantage.

VitalQIP delivers reliable DDI with proven scalability to 40 percent of the Forbes top 100 companies. It is a proven, scalable, reliable and secure product providing rock-solid performance in the largest deployments around the world, with a 20-year record of delivering DDI service in the most demanding IP networks.

Nokia is the proven partner for enterprises and service providers. VitalQIP customers include some of the world's largest telecommunications companies, banks, universities and military forces, operating some of the world's most critical data networks.

Nokia Oyj
Karaportti 3
FI-02610 Espoo
Finland
Tel. +358 (0) 10 44 88 000

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