

ESSENTIAL NETWORK SERVICES FOR IDENTITY-DRIVEN NETWORKS

DNSone with Keystone Advantages

- Combined management views and automation of tasks through integration of DNS and DHCP services
- Industry-standard DNS services using the latest BIND implementation
- One-button software upgrades that make it easy to add new features and to remain secure
- High availability with fast network failover and database synchronization via bloxHA™ and bloxSYNC™ technology
- Secure management using SSL-based VPN that works from anywhere, through any firewall
- Infoblox Views—an enhanced version of BIND Views—that provides virtual DNS services and allows a single Infoblox appliance to respond differently to DNS queries based on the source of the query
- Built-in TFTP server for distributing firmware and configuration files to network devices, such as VoIP phones and wireless access points, during the booting (start-up) process
- Support for network quarantine applications like Authenticated DHCP in large environments

The Advantages of Appliances Combined with Distributed ID Grid Technology

In today's business environment, providing nonstop network identity services—including DNS, DHCP, IPAM, and others—is essential. Appliance delivery of these services has become a recommended industry best practice because appliances are inherently more reliable, manageable, scalable, and secure than software on general-purpose servers. When equipped with the DNSone® with Keystone™ package, distributed Infoblox appliances can be connected into unified ID grids that provide unparalleled management, control, visibility, and service resiliency. Infoblox ID grids provide a foundation for delivering highly available, secure, and easily managed network identity services across an enterprise, including:

- Protocols (DNS, DHCP, RADIUS, TFTP, NTP, etc.)
- Data (IP addresses, MAC addresses, user credentials, transaction logs, etc.)
- Files (policies, device configuration files, executable programs, etc.)

Infoblox ID grids combine the power of nonstop local service delivery with the benefits of consolidated management and control.

The Need for ID Grids

The number and types of IP-based devices are growing rapidly. Everything from cell phones and thermostats to door locks and cameras are sharing IP networks along with an increasing number of desktops, laptops, servers, and printers. This places growing stress on the core addressing, naming, authentication, and related network identity services that are needed to support essentially all network applications, including e-mail, web services, voice over IP (VoIP), Microsoft Active Directory, wireless networking, and network access control (NAC). Ensuring high availability and simplifying management of these services is now a top IT priority.

Infoblox network identity appliances running the DNSone with Keystone software package and deployed in an ID grid, deliver critical network identity services in distributed environments with high availability, security, simplified management, and maximum data integrity—ensuring the availability and performance of all critical network applications.



DNSone with Keystone software package is available on all Infoblox appliance platforms

DNSONE WITH KEYSTONE PACKAGE FEATURES AND BENEFITS

The DNSone with Keystone package delivers reliable, manageable, scalable, and secure network identity services at a lower cost and with higher security than server-software and with greater network availability than any competing solution. The services included in the DNSone with Keystone package include:

- Naming services via Domain Name System (DNS);
- Addressing services via Dynamic Host Configuration Protocol (DHCP);
- Network visibility and control via IP address management (IPAM);
- Authentication, authorization, and accounting services via RADIUS Proxy;
- File delivery services via Trivial File Transfer Protocol (TFTP);
- Time synchronization services via Network Time Protocol (NTP)

DNSone® with Keystone™ Package

The DNSone with Keystone package also includes the Keystone upgrade which provides patented Infoblox technology for linking distributed appliances into a unified ID grid. The embedded databases in all Infoblox appliances within an ID grid are intelligently interconnected so that they share a common, real-time view of host names, IP leases, and other network identity data. The ID grid uses secure communication among appliances and also uses sophisticated database technology to maintain data integrity. This ensures that all appliances in the grid have the right data and that the grid continues to deliver services without data loss or corruption in the face of a wide range of device or WAN failures. Infoblox ID grid technology also supports intelligent data replication to minimize the use of bandwidth in the grid and to enable “right-sized” appliances to be deployed at each location.

ADDITIONAL BENEFITS INCLUDE

High-availability Services

The DNSone with Keystone package runs on the reliable Infoblox appliance platforms, which are designed for nonstop operation in high-performance networks. High-availability (HA) services are supported by bloxHA™ technology—which uses industry-standard Virtual Router Redundancy Protocol (VRRP) for sub 5-second network failover—and bloxSYNC™ technology to ensure real-time database synchronization with no loss or duplication of data.

Integrated, Zero-admin Database

The DNSone with Keystone package stores all DNS and DHCP data in the integrated bloxSDB™ database, which is built into the Infoblox NIOS™ operating system software provided on all Infoblox appliances. The bloxSDB database is designed specifically to support integrated network identity services and provides unmatched consistency between service and management views of IP-address-centric network identity data without compromising performance.

Easy-to-use GUI

The DNSone with Keystone package includes the ID Grid Manager that can be run from a PC running Windows XP or Linux OSes. The abstracted, data-centric interface streamlines complex and repetitive management operations and enables administrators to focus on data and services rather than boxes and protocols. This reduces management time and eliminates many common data entry errors.

Integrated Management

The DNSone with Keystone package provides practical operational efficiencies that lower total cost of ownership. For example, creating a DHCP range automatically creates an associated DNS record, reducing the number of tasks required of network administrators.

Granular, Role-based Administration

Administrators can delegate the management of particular zones, networks, and devices to other administrators, and they can also create “read-only” profiles for delegated administrators. This allows companies to grant individuals, in different parts of an organization, management authority over only a portion of the network’s resources.

Hardened Security

The Infoblox NIOS software is hardened and consistently withstands security scans and attacks from the most demanding government and military organizations. DNS and DHCP services can be upgraded easily to support the latest versions of BIND and DHCP, ensuring minimum exposure to security threats. In the event that a new exploit is discovered, the underlying Infoblox NIOS software can be upgraded in minutes via a single, simple operation. This makes it much more difficult to penetrate than general-purpose operating systems with known vulnerabilities. Management communication is secured using Secure Sockets Layer (SSL)-encrypted VPNs for protection against management compromise.

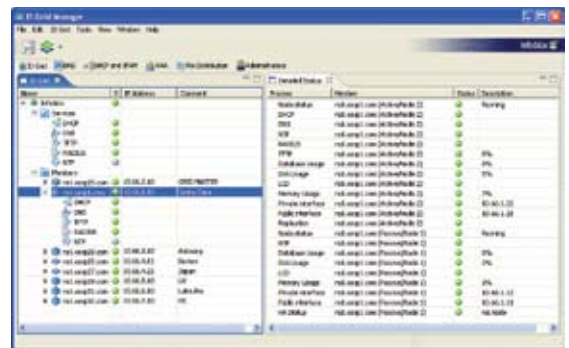
FOUNDATION FOR NAC

The ID Aware DHCP toolkit works with the DNSone package to provide a foundation for network access control:

- Works with existing network infrastructure from any vendor and requires no network upgrades;
- Uses existing directories and requires no new provisioning;
- Easily customized by web-configurable interface;
- Fully extensible—includes complete source code;
- Simple, no-cost licensing.

SCALABLE, INTEGRATED MANAGEMENT

The flexible ID Grid Manager user interface provides the visibility and control needed to manage all network identity services in dynamic IP networks. The ID Grid Manager consolidates the management of all appliances, services, and data—and provides summary and drill-down views with a simple click. Granular, role-based management capabilities enable administrators to delegate specific networks, ranges, hosts, and devices to junior or departmental personnel. The ID Grid Manager makes it easy to cope with fast-changing networks, and because all data reside in the Infoblox appliance database, the status of devices and services within the ID Grid Manager always reflects the actual, real-time state of the network.



Manage appliances, services, and data using the ID Grid Manager.

NONSTOP INFRASTRUCTURE FOR CRITICAL NETWORK SOLUTIONS

Infoblox network identity appliances include a range of special capabilities that serve key network applications:

A Foundation for Network Access Control (NAC)

Used in conjunction with appliances running Infoblox DHCP services, the Infoblox ID Aware™ DHCP solution provides a foundation for a wide array of network access control (NAC) implementations. The ID Aware DHCP toolkit supports basic NAC services such as “guest access” and Authenticated DHCP out of the box, and can optionally integrate with third-party products to support sophisticated NAC implementations that include endpoint assessment and remediation services.

Voice over IP

Users demand dial-tone reliability for voice communications. To deliver this level of reliability in an IP environment requires a nonstop DHCP service for assigning IP addresses to voice-over-IP handsets and IP soft phones, as well as file delivery services for providing updated phone firmware and configurations. The DNSone package delivers a combination of features that provides an easy-to-manage, high-availability solution for IP voice applications:

High-availability DHCP

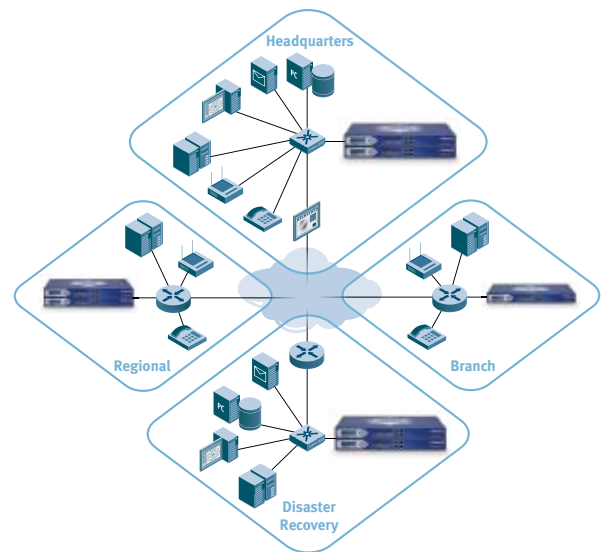
Infoblox supports industry-standard DHCP failover that works across distributed WANs. In addition, pairs of Infoblox appliances can be easily configured in “HA mode” to provide fast failover and real-time data synchronization without requiring inefficient allocation of IP addresses.

Built-in TFTP

Historically, TFTP has been provided by stand-alone servers managed individually at each location with no centralized control and no high-availability capabilities. The DNSone with Keystone package extends the benefits of grid technology to managing IP telephony by providing a distributed, centrally managed TFTP service. Firmware and configuration files are uploaded to the ID grid master and automatically delivered to all appliances on the grid with a single operation. This greatly reduces the time required to manage IP phone firmware and ensures that all devices always have the right software and configurations.

Reliable DNS Infrastructure for Microsoft Active Directory (AD)

Infoblox is a Microsoft Certified Partner and the Infoblox DNSone package includes special support for easy integration into Microsoft AD environments. This enables enterprises to ensure that the critical DNS services needed for their Microsoft and non-Microsoft applications are always available and secure.



Infoblox appliances using the DNSone with Keystone package are distributed throughout a network in an ID Grid allowing all of the appliances, network services and network identity data to be centrally managed using the ID Grid Manager.



DNS

RFCs supported: 1034 and 1035
 Dynamic update, RFC 2136
 Incremental zone transfer, RFC 1995
 Notification of zone changes, RFC 1996
 Secret key transaction authentication (TSIG), RFC 2845
 Classless IN-ADDR.ARPA delegation, RFC 2317

Protocol engine: BIND 9.2.3

Additional Capabilities

- Secure dynamic DNS updates using TSIG
- Conditional forwarding
- Microsoft Active Directory support
- Infoblox Views
- IP-address-based access lists on queries, zone transfers, and dynamic updates
- Zone import tools
- Customizable TTL settings

DHCP

RFCs supported: RFCs 2131 and 1531
 BOOTP, RFCs 1534 and 2132

Protocol engine: DHCPD 3.0.1

Additional Capabilities

- VLSM (Variable Length Subnet Mask) support
- CIDR (Classless Inter-Domain Routing) support
- Multiple subnets per segment (supernetting)
- “Static leases” based on MAC address (manual allocation)
- MAC-address-based filtering
- Support for custom DHCP options
- Address availability checking before assignment
- DHCP relay agent/Option 82 support
- Secure DHCP-DNS integration updates DNS when leases are issued
- Windows, Unix, and Mac OS compatibility
- External syslog server support

Performance Capacities

	Infoblox-550	Infoblox-1050	Infoblox-1550	Infoblox-1552
DNS Queries Per Second	12,000	24,000	36,000	36,000
DHCP Leases Per Second	75	150	225	225
Capacity (Database Objects)	25,000	150,000	400,000	400,000

Part Numbers

Description	
Infoblox-550 with DNSone/Keystone, US Power Cord	IB-550-DNS-K-01
Infoblox-550 with DNSone/Keystone, Japan Power Cord	IB-550-DNS-K-02
Infoblox-550 with DNSone/Keystone, UK Power Cord	IB-550-DNS-K-03
Infoblox-550 with DNSone/Keystone, EUR Power Cord	IB-550-DNS-K-04
Infoblox-1050 with DNSone/Keystone, US Power Cord	IB-1050-DNS-K-01
Infoblox-1050 with DNSone/Keystone, Japan Power Cord	IB-1050-DNS-K-02
Infoblox-1050 with DNSone/Keystone, UK Power Cord	IB-1050-DNS-K-03
Infoblox-1050 with DNSone/Keystone, EUR Power Cord	IB-1050-DNS-K-04
Infoblox-1550 with DNSone/Keystone, US Power Cord	IB-1550-DNS-K-01
Infoblox-1550 with DNSone/Keystone, Japan Power Cord	IB-1550-DNS-K-02
Infoblox-1550 with DNSone/Keystone, UK Power Cord	IB-1550-DNS-K-03
Infoblox-1550 with DNSone/Keystone, EUR Power Cord	IB-1550-DNS-K-04
Infoblox-1552 with DNSone/Keystone, US Power Cord	IB-1552-DNS-K-01
Infoblox-1552 with DNSone/Keystone, Japan Power Cord	IB-1552-DNS-K-02
Infoblox-1552 with DNSone/Keystone, UK Power Cord	IB-1552-DNS-K-03
Infoblox-1552 with DNSone/Keystone, EUR Power Cord	IB-1552-DNS-K-04

Infoblox product warranty and services

The standard hardware warranty is for a period of one year. The system software has a 90-day warranty that will meet published specifications. Optional service products are also available that extend the hardware and software warranty. These products are recommended to ensure the appliance is kept updated with the latest software enhancements and to ensure the security and availability of the system. Professional services and training courses are also available from Infoblox. Information in this document is subject to change without notice. Infoblox Inc. assumes no responsibility for errors that appear in this document.