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LEVERAGING THE POWER OF INFOBLOX IN A MICROSOFT ENVIRONMENT

A three-step approach for implementing Infoblox DDI with Microsoft

THE CHALLENGE

Critical network services, including DNS (Domain Name Service), DHCP (Dynamic Host Configuration Protocol), and IPAM (IP address management), collectively known as DDI, are vital to today's dynamic network environments. While Microsoft solutions offer DNS and DHCP for "free," in most cases, the disjointed nature of these implementations, combined with the manual effort they require, is anything but free. Reliance on complex hybrid/multi-cloud networking is expanding rapidly, outstripping the capabilities of outdated DNS and DHCP solutions. Increasingly, IT organizations of all sizes require a fully integrated DDI solution that optimizes visibility, automation and control while enhancing security. Microsoft DNS and DHCP can fall short in serving these needs, driving companies to seek out enterprise-grade DDI with a broader feature set.

THE POWER OF CONSOLIDATED DDI

When it comes to effective network management, IT groups can overcome the inherent limitations of Microsoft DNS and DHCP while still working in Microsoft environments. For example, they can enhance or fully replace Microsoft Windows Server DNS and its DHCP overlay with best-in-class networking services, like Infoblox DDI. In so doing, they can continue to leverage the advantages of Microsoft Active Directory (AD) and other Microsoft Server roles, features and productivity tools. The resulting solution improves network availability, visibility, security and operational efficiencies. Moreover, by consolidating DDI onto a single easy-to-manage platform, IT can free up computing resources on Microsoft Servers running other roles and features.

A THREE-STEP APPROACH TO ACHIEVING DDI BEST PRACTICES

By incorporating DDI best practices into their Microsoft environments through Infoblox DDI, organizations can cost-effectively support the escalating demands of hybrid/multi-cloud deployments, security, compliance and mergers and acquisitions (M&A), among other business requirements. The process involves three main steps:

- **Phase I:** Improve the visibility and manageability of the Microsoft environment by deploying the Infoblox DDI management console with value-added Infoblox solutions, including IPAM for Microsoft and Network Insight.

- **Phase II:** Expand the Infoblox solution with automation and advanced reporting.

- **Phase III:** Create a best-in-class solution by also integrating Infoblox DNS with Microsoft AD for robust security, availability and system-wide efficiencies.

IT organizations can follow these steps one at a time or implement the overall solution in a single project.

PHASE I: VISIBILITY AND MANAGEABILITY

Deploy Infoblox DDI Management Console with Value-Added Infoblox Solutions, IPAM for Microsoft and Network Insight to Improve Visibility and Management

This initial step retains the current Microsoft protocols for DNS and DHCP. Infoblox DDI management console, IPAM for Microsoft and Network Insight products are introduced into the environment.

Infoblox DDI management console provides centralized management and authoritative visibility, offering a unified interface for managing DNS, DHCP and IPAM across multiple Microsoft servers.

- **Manageability:**
    - » Organize DNS data into logical views for easier management.
    - » Effortlessly manage IP address allocations with integrated DHCP.

- **Visibility:**
    - » Get detailed tracking of IP addresses, reducing IP conflicts.
    - » Discover on-premises, hybrid/private and public multi-cloud IP addresses.

IPAM for Microsoft provides centralized management of Microsoft DNS/DHCP services and Infoblox IP addresses from a single UI.

- **Visibility:** Gain full discovery of Microsoft servers.
- **AD Sites Integration:** Streamline management of sites and services.

Network Insight enriches your Infoblox solution by automating the discovery of network devices and integrating infrastructure device data with IPAM, as well as:

- **Device Inventory:** Gain insights into network devices (routers, switches, firewalls, etc.).
- **Topology Maps:** Visualize network topology for better understanding.

PHASE II: ADVANCED DHCP AND AUTOMATION

Add Automation for Virtualization and Private Clouds and Extend Visibility with Advanced Reporting

With enhanced IPAM from Infoblox in place, the next step on the path to DDI best practices is to build in automation for virtualization and extend visibility into historical data and trends. In this step, Microsoft DHCP services are replaced by Infoblox with support from other Infoblox solutions.

Infoblox DHCP improves the network team's ability to manage the protocol's IP address assignments with a greater level of visibility. In addition, it automates thousands of repetitive tasks and provides templates with inheritance to shorten workflows. Top benefits include:

PHASE II: ADVANCED DHCP AND AUTOMATION (CONTINUED)

- **High Availability:** Ensures continuous network service with DHCP failover.
- **DNS Authentication:** Supports GSS-TSIG to prevent unauthorized or malicious DNS updates and verifies client's AD domain membership before adding DNS name and IP.
- **Management Efficiency:** Tracks DHCP lease data to help enable efficient resource utilization, network stability, security and streamlined management.

Automated IP Assignment simplifies and streamlines policy-based IP assignments, gives teams greater control with the ability to define rules for IP allocation and increases IP management efficiency by reducing manual effort, errors and wasted resources.

Additional components include:

- **Automation Proxy:** Ensures seamless automation for DNS and DHCP across Infoblox and Microsoft environments.
- **Ecosystem Integration:** Enables automations into the Microsoft environment for connections to other vendors' products.
- **Reporting and Analytics:** Provides full visibility through pre-built, customizable dashboards and reports for trending, alerting, analysis and cost savings.

PHASE III: INTEGRATION, SECURITY AND EFFICIENCY

Optimize Your Microsoft Environment with a Full Infoblox DDI Implementation

The last step in creating a best practice solution involves upgrading to enterprise-grade Infoblox DNS and separating Microsoft DNS from AD (which is a Microsoft Design Guide best practice). This ensures rock-solid networking across critical DNS, DHCP, and IPAM services while improving the performance of the AD servers in the network.

DNS with AD Integration provides:

- **Seamless Coexistence:**
  - » **Infoblox AD Connector:** Integrates with Microsoft Active Directory.
  - » **Unified DNS Management:** Manage DNS records across both systems.

- **DNS Security** enables you to catch attacks earlier in the attack chain at the time of query and includes:
  - » **DNS Firewall:** Blocks malicious DNS traffic.
  - » **DNS Anycast:** Enhances DNS availability.

- **Additional Security Enhancements:**
  - » **Infoblox Advanced DNS Protection:** Provides resilient DNS service that detects and drops malicious traffic during attacks.

PHASE III: INTEGRATION, SECURITY AND EFFICIENCY (CONTINUED)

> » **Enhanced DNSSEC:** Seamlessly integrates security mechanisms with DNSSEC, ensuring data integrity and providing origin authentication.
>
> » **DNS attack prevention:** Stops DNS tunneling and DNS-based data exfiltration attempts.
>
> » **DNS communication blocking:** Prevents connections to malicious Command and Control (C2) servers, thereby stopping threats before they can spread.

- **High Availability:**
  - » **DNS Grid:** Ensures uninterrupted DNS service.
  - » **Load Balancing:** Distributes DNS queries efficiently.

- **Operational Benefits:**
  - » Scalability: Infoblox scales with network growth.
  - » Cost Savings: Efficient management reduces operational costs.

CONCLUSION

By implementing Infoblox DDI as part of a so-called free Microsoft environment, IT groups realize that the initial cost is more than offset by productivity gains, reduced staffing requirements, better visibility into network configurations, deeper and richer information, heightened security for hybrid/multi-cloud infrastructure, support for compliance forensics and other operational efficiencies.

Get started on your path to DDI best practices. Find out more about Infoblox DDI by visiting https://www.infoblox.com/products/ddi/

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Infoblox unites networking and security to deliver unmatched performance and protection. Trusted by Fortune 100 companies and emerging innovators, we provide real-time visibility and control over who and what connects to your network, so your organization runs faster and stops threats earlier.

Corporate Headquarters
2390 Mission College Blvd, Ste. 501
Santa Clara, CA 95054

+1.408.986.4000
www.infoblox.com