Amazon Route 53 and Infoblox DDI Integration for Hybrid Cloud Deployments

SUMMARY

Amazon Route 53 DNS service offers limited support beyond pure Amazon Web Services environments, which means enterprises cannot create a single, unified DDI solution to serve their entire enterprise, including their enterprise campus networks and hybrid clouds, with Route 53 alone. Route 53 focuses on only AWS VPCs, which limits connectivity, visibility, and security when used for non-AWS cloud platforms.

Infoblox has extended our industry-leading DDI platform to integrate with AWS and Amazon Route 53 DNS, providing a unified, enterprise-grade solution for AWS and hybrid cloud deployments. Integration between Amazon Route 53 and Infoblox bridges the gap between enterprise IT and cloud teams to reduce complexity by providing a single console to manage on-premises, AWS public cloud, and private cloud deployments. This solution meets the need of current and future Infoblox customers who are expanding to AWS and are using Amazon Route 53 for DNS.

Lack of Visibility, Automation and Consistency Can Plague Amazon Route 53 Deployments

Amazon Route 53 offers private DNS functionality within AWS VPCs. However, an enterprise using a hybrid cloud faces operational challenges even while using Amazon Route 53 including:

- **Limited DNS**: DNS resolution or responses to queries are isolated within their AWS network, which causes issues when communication is needed outside that particular AWS Private Hosted Zone. To circumvent this, IT teams often spin up multiple BIND servers to pass DNS traffic outside the isolated AWS zones. This approach adds complexity and lacks consistency across disparate DNS approaches.

- **No IPAM**: AWS has no IP address management (IPAM) solution and often has limited visibility of virtual instances, which negatively impacts day-to-day management and adds time for auditing and compliance purposes.

- **Lack of visibility for hybrid cloud**: Without a consistent DNS and IPAM solution across the hybrid cloud, enterprise IT has to use several tools to access DNS and IP address data. This leads to longer troubleshooting times, reduces the ability to perform network planning, and increases security risks. This also increases inconsistencies in enterprise-wide management of the DNS and IP address space.

- **Limited DNS security**: Route 53 has limited DNS security for both AWS and hybrid cloud deployments. Data exfiltration using DNS tunneling and malware using DNS to spread are common DNS-based attacks that can cripple IT networks.

Figure 1: Unified management across a hybrid cloud
Building a Unified DNS and IPAM Solution with Amazon Route 53

Infoblox DDI for AWS integrates with the Amazon Route 53 DNS service providing a centralized console across AWS and hybrid cloud deployments for visibility, consistent management, and security. Without being restricted to Amazon Route 53 Private Hosted Zones, the Infoblox and Amazon Route 53 solution enables reliable hybrid cloud deployments that extend beyond just AWS.

Enhance Visibility across AWS and Hybrid Deployments

Since Route 53 focuses exclusively on AWS virtual resources, visibility is limited only to those public cloud instances. Infoblox DDI for AWS detects AWS virtual instances and tracks the resources within a single platform for complete visibility when new instances are created, as well as cleaning up records when instances are destroyed. In addition, users receive a consistent view of AWS and non-AWS network parameters within a single pane of glass when combining AWS with virtualization or cloud deployments.

Maintain Consistent DDI Platform for Hybrid Cloud

The vast majority of AWS users leverage a hybrid environment with a combination of AWS, on-premises, and/or private cloud. Instead of disparate solutions or out-of-date spreadsheets, Infoblox reduces the need to spin up general-purpose DNS servers to communicate from on-premises to AWS and integrates the DNS records across multiple platforms within a single platform to improve manageability and consistency.

Extend DNS Security to AWS

Amazon Route 53 has limited DNS security and IPAM views for both AWS and hybrid cloud deployments. Since DNS-based attacks are the fastest growing security threat vector, users can leverage Infoblox DNS Security and IPAM for AWS records by serving Amazon Route 53 zones through Infoblox DNS. Implementing Infoblox Internal DNS Security as part of a comprehensive strategy greatly reduces the risk of DNS-based attacks and exploits.

Conclusion

Amazon Route 53’s isolated focus on AWS has management and core network services gaps when managing on-premises and hybrid infrastructure—including lack of visibility and inconsistency across platforms. Infoblox DDI for AWS eliminates those gaps by leveraging the industry-leading DDI platform and reduces complexity with a single console to manage on-premises, AWS public cloud, and private cloud resources and critical DNS components.

Contact us today to find out more about Infoblox DDI for AWS.