

Cisco Prime Network Registrar 8.3 Business Data Sheet

Although service providers worldwide have begun to adopt IPv6, this challenging migration is expected to take years. Compounding this transition is the growth in demands for network services, led by rich-media applications, an increasing number of connected users, and the explosive growth in connected devices. To meet this demand, service providers require a full-featured, integrated Domain Name System (DNS), Dynamic Host Configuration Protocol (DHCP), and automated IP-address-management (IPAM) solution to plan, track, and manage IP addresses and ease the transition to IPv6.

Product Overview

Cisco Prime™ Network Registrar is a high-performance, scalable, integrated DNS, DHCP, and IPAM (DDI) solution that supports the IPv4-to-IPv6 transition and allows dual-stack deployments on a single server. The solution includes the following integrated components and their respective services, all of which support both IPv4 and IPv6:

- A single DHCP server for device network access
- A single DNS server for IP address translation and service delivery
- A DNS caching server that supports DNS Security Extensions (DNSSEC) and is designed to prevent cache poisoning and other attacks
- A powerful, comprehensive IPAM system to automate and manage all IP address requirements

Features and Capabilities

- **IP address block management:** Cisco Prime Network Registrar IPAM is an easy-to-use, reliable solution with comprehensive management of IP address space including IP address blocks and subnets managed by service providers. Innovative tools provide centralized, full-lifecycle support of IP addresses, facilitating easy, integrated management of IPv4 and IPv6 address space, address assignment, and allocation and reallocation, as well as DHCP and DNS configurations, all in one solution.

Automation improves operational efficiencies and service levels and helps eliminate IP conflicts and configuration errors, reducing downtime of DHCP and DNS services and lowering network operating costs. With the ability to discover, track, allocate, assign, and reclaim IP addresses automatically and tools to model IP data, service providers can significantly streamline operations.

- **Visibility:** Cisco Prime Network Registrar dashboards provide real-time visibility into IPv4 and IPv6 networks, subnet usage, and device connections for faster troubleshooting. An intuitive GUI promotes ease of use and boosts user productivity. The IPAM component allows detailed IP audit reporting and diagnostics as well as operator-defined thresholds and alerts that provide notification of impending address depletion.

- **Flexibility and control:** A patented, flexible container mechanism enables you to define topologies, address spaces (including block allocations and subnets), domains, device types, and associated attributes. You also can fully manage, configure, and report on these user-defined elements with easy customization capabilities across these functions. Granular, role-based IPAM delegation of functional and logical access, visibility, and control allows multiple administrators to manage the system with different rights to the system. Extensive application programming interfaces (APIs) and command-line interfaces (CLIs) enable integration with external systems for advanced automation that is critical for service providers.
- **Easy IPv4-to-IPv6 transition:** The solution allows dual-stack deployments on a single server, and the IPAM system eases the transition from IPv4 to IPv6 (as well as IPv6 deployment planning) by providing:
 - A single view into IPv4 and IPv6
 - Options to integrate IPv4 and IPv6 and migrate smoothly
 - Automatic IP address and subnet discovery and network inventory for address planning and deployment of IPv6

By helping to automate the transition from IPv4 to IPv6, Cisco Prime Network Registrar mitigates IP address scarcity, facilitates deployment of new revenue-generating services, and lowers IP address management overhead.

- **DNS:** Without a fast, reliable, and secure DNS service, subscribers' broadband Internet access are compromised. In addition, many service providers have created a dynamic service-delivery infrastructure based on DNS to help ensure high service quality and competitive service delivery. Cisco Prime Network Registrar DNS is standards-compliant, supports both IPv4 and IPv6, and is reliable with support for high-availability DNS. High performance delivers query throughput that far exceeds competitive solutions. Cisco Prime Network Registrar DNS offers DNS Views and DNS Firewall to better secure your customers.
- **DHCP:** Cisco Prime Network Registrar DHCP is scalable, fast, and powerful to meet the demands of complex networks and support millions of devices on those networks. Exceptional performance capabilities help ensure that the DHCP server can handle particularly heavy loads, including the surge of demand that typically follows a power failure. In addition, the solution includes support for DHCPv4 and DHCPv6 failover and a patent-pending discriminating rate limiter for avalanche protection to limit downtime after network outages. The full-featured DHCPv6 server provides support for address assignment, both stateless and stateful configuration, prefix delegation, and prefix stability for full IPv6 address management. Powerful extension support for customizing DHCP server processing allows providers to easily create new solutions for billing, security, lawful interception, and other applications.
- **Multivendor support:** The IPAM component supports multivendor DNS and DHCP servers, including the Internet Systems Consortium (ISC) DHCP, BIND 9 DNS, and Microsoft. Cisco also offers a Microsoft Server DHCP Import Tool to facilitate migrations to Cisco Prime Network Registrar DHCP.
- **DNSSEC:** A separate, extremely fast caching-only server performs DNSSEC validation and helps protect resource records against common DNS vulnerabilities.
- **Cloud:** Service providers can deliver Cisco Prime Network Registrar as a cloud-based or managed service to business subscribers. Capabilities include a secure multitenant environment and a web-based self-service portal for tenant administrators when configuring DHCP and DNS. Cloud integration can be further enhanced through Representational State Transfer (REST)/RESTful web services APIs.

- **Operations integration:** Given the requirement to assign at least one IP address per new subscriber, automation of the IPAM process within the overall provisioning process can improve time to revenue while reducing provisioning errors. Flexible APIs and CLIs facilitate intersystem provisioning and workflow automation.
- **Deployment options:** Cisco Prime Network Registrar is available as a virtual appliance, offering fast startup and rapid time to value.

About Cisco Prime Portfolio

The Cisco Prime portfolio of IT and service provider management offerings empowers organizations to more effectively manage their networks and the services they deliver. Built on a service-centered foundation, the Cisco Prime portfolio supports integrated lifecycle management through an intuitive workflow-oriented user experience, providing A-to-Z management for evolved programmable networks, mobility, video, cloud, and managed services.

Service and Support

Using the Cisco® lifecycle services approach, Cisco and our partners provide a broad portfolio of end-to-end services and support that can help increase the business value and return on investment of your network. This approach defines the minimum set of activities needed, by technology and by network complexity, to help you successfully deploy and operate Cisco technologies and optimize their performance throughout the lifecycle of your network.

For More Information

For more information about Cisco Prime Network Registrar, visit <http://cisco.com/go/networkregistrar>, contact your local account representative, or send an email to ask-networkregistrar@cisco.com.



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