



# Infinity SD-IPAM

Data Sheet by FusionLayer Inc.

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## Struggling With Network Automation?

The shift from traditional network architectures to the software-defined world is gaining momentum. As new automated processes are being introduced to unleash service agility, data centers and service providers operating at scale are quickly realizing that commonly used spreadsheets and other traditional IP Address Management solutions are creating a bottleneck in their automated service architectures. As an automated process is only as efficient as its weakest link, the traditional IPAM solutions can destroy the Return on Investment (ROI) of an entire service automation program.

## Software-Defined IPAM (SD-IPAM) Comes to Rescue

FusionLayer Infinity is the world's first Software-Defined IP Address Management (SD-IPAM) solution that enables unified management and provisioning of all network resources such as blocks, networks, and release parameters. With off-the-shelf connectors that enable plug-and-play integrations with popular orchestrators and controllers via REST APIs, it integrates seamlessly with virtually any service automation architecture.

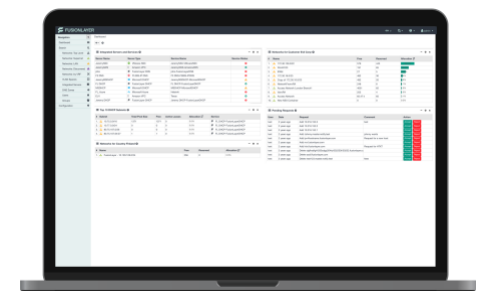
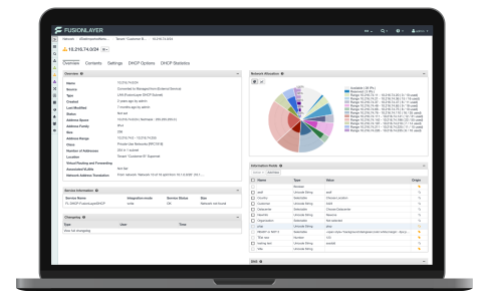
In addition to its patented business logic for provisioning free network prefixes and release parameters such as IP addresses, names, and Object based Unique Identifiers (UID) in multitenant environments, FusionLayer Infinity comes with a hybrid database architecture employing both NoSQL and PostgreSQL databases. Thanks to this groundbreaking solution architecture, FusionLayer Infinity provides up to x25 scalability advantage over old-school IPAM solutions, allowing tens of millions of objects to be managed and provisioned centrally by a single SD-IPAM system.

## Features:

- Unparalleled scalability – up to x25 scalability advantage
- Simplified User Experience (UX) designed for multitenancy
- Supports network overlap and role-based access control
- Northbound REST API with patented business logic for:
  - Integrated DNS and DHCP instances
  - AWS and Azure public Clouds
  - SDN controllers
- Provisioning free networks/prefixes (SDN, SD-WAN)
- Supports RedHat, Microsoft, OpenStack, HPE, F5, & VMware
- Southbound integration with built-in connectors supporting:
  - SDN controllers from Cisco and Nuage Networks
  - Integrated DNS and DHCP server instances
- Automated Object Unique ID (UID) generation for NFV
- Native support for IPv4, Pv6, and dual-stack

## Key Benefits:

- Eliminate network downtime and service disruptions with:
  - single pane of glass for traditional and virtual networks
  - provides network source of truth for automation
- Maximize infrastructure ROI through automation:
  - REST-based assignment of subnets, IPs, names
  - REST-based assignment of VLANs and policy information
- Support multiple orchestrators and controllers simultaneously:
  - Converged infrastructure (e.g. Nutanix)
  - Public clouds
  - Edge clouds
  - Hybrid clouds
- Speed up time to market for new services
- Real-time visibility into subnet and IP assignments
- Native support for multitenancy through:
  - Ability to manage overlapping networks and VLANs
  - Role-based access control (RBAC) for delegations
  - Full audit trails (who, what, when) with undo
- Zero-touch DNS change management process





## Compatible With:

### Cloud Services:

- Microsoft Azure
- Amazon AWS

### Virtualization Platforms:

- KVM
- Microsoft Hyper-V
- VMware ESXi

### NFV Environments:

- HPE NFVI-I
- Red Hat OpenStack

### DHCP Servers:

- FusionLayer DHCP
- Microsoft DHCP
- VMware DHCP Edge

### Orchestrators:

- OpenStack Liberty+
- Cisco UCS Director
- Kubernetes
- Microsoft SCVMM
- VMware VCO / vRealize
- Ansible, Chef, Puppet
- Additional by request

### DNS Servers:

- FusionLayer DNS
- Microsoft DNS
- F5 Big-IP DNS



## Main Features at a Glance:

### Unified management of all network blocks and subnetworks:

- Native support for IPv4, IPv6, and dual-stack networks
- Support for overlapping private address spaces
- Automated synchronization with SDN controllers
- Optional L2/L3 discovery for traditional networks
- Support for binding subnets with DHCP services
- Supports default DNS zones for each subnet

### Advanced business logic for provisioning:

- Off-the-shelf connectors for supported orchestrators
- Provisions IP, name, and/or UID based network tags
- Provisions networks/prefixes based on Supernet tags
- Supports integration with multiple external systems

### Automate DNS management process:

- Slave zone creation
- Zone serial incrementing
- Reverse entries
- Validation and consistency checks

### Can be operated as CMBD for all network-related information:

- Data structure fully configurable, no restart required
- All data accessible via REST (read, write, remove)
- REST API supports integration with multiple systems
- Automated data synchronization from multiple sources

### IPAM tools for network management and assignments:

- Network management wizards for different network types
- Tools for effecting bulk changes
- Bitmask/network calculators
- IP calculators
- Automated synchronization of DNS data
- Default DNS zones and naming on subnet-level
- Merge and split subnetworks on the fly
- Subnet-use and allocation reports
- Import / export tools

### Native support for multitenancy and RBAC:

- Supports overlapping private networks in a single system
- Role-based Access Control (RBAC) for restricted access
- Centralized authentication via LDAP, RADIUS, and PAM

### High Availability (HA) & Scalability:

- Embedded Redis NoSQL database for data caching
- Embedded PostgreSQL database for persisting storage
- Supports HA through clustered deployments
- Scales to tens of millions of objects under management

## Supporting Datasheets:

[DHCP Server Datasheet](#)

[DNS Server Datasheet](#)