

# DANOS-Vyatta edition

## For Disaggregated Cell Site Gateways

### DANOS-Vyatta edition NOS Overview and Architecture

DANOS-Vyatta edition (DVE) Software is the industry first commercially available disaggregated Network Operating System (NOS) for both wireless and wireline use cases. It is designed with programmability, application awareness, network visibility, and automation built-in to offer operational efficiency and service agility. DANOS-Vyatta edition is deployed today in AT&T's production network.

DANOS-Vyatta edition is offered as a commercial solution backed by IP Infusion's decades of experience as the leader in embedded NOS technologies.

#### Network operator friendly

- Ease of installation and designed to be readily automated and orchestrated
- Support for standard APIs and data models
- Familiar CLI interface
- Multiple simultaneously installed images
- Image rollback, global config file, etc.

#### Modular and hardware agnostic architecture

- Well defined interfaces between modules
- Custom packaging for different diverse deployments

- APIs enable 3rd-party developer support
- Forwarding Abstraction Layer enables seamless support for variety of ODMs
- Efficient IPC between feature modules enables scalability and feature velocity

#### Virtualization ready

- Bare-metal and private/public clouds capable
- Capable of both container and VM virtualization

#### Linux at the core

- Supports native Linux networking APIs, daemons and tools
- DevOps ready, scripting API support

### DANOS Open Source NOS

DANOS (Disaggregated Network Operating System) is an open source project hosted by the Linux Foundation that offers an open Network Operating System (NOS) for disaggregated white box networking devices. AT&T contributed the DANOS code base, which is the core NOS adopted by the DANOS-Vyatta edition commercial distribution. DANOS facilitates rapid evaluation, demonstrations, and DANOS applications qualification. Any updates to the core NOS adopted by DANOS-Vyatta edition will be up-streamed to the DANOS code base.

DANOS-VYATTA EDITION FEATURE	SPECIFICATION
Layer 2 Switching	IEEE 802.1Q VLANs and Q-in-Q Ethernet Link Aggregation Group (LAG) Jumbo frames on all ports
Layer 3 Routing	IPv4 and IPv6 unicast routing Open Shortest Path First (OSPFv2, OSPFv3) Multiprotocol Border Gateway Protocol (MP-BGP) Equal-Cost Multipath (ECMP) Bidirectional Forwarding Detection (BFD) Virtual Router Redundancy Protocol (VRRP) Dynamic Host Control Protocol (DHCP)
Quality of Service (QoS)	Hierarchical QoS Virtual Output Queuing (VOQ) Classification and remarking based on DSCP Priority Queuing (PQ), Shaping Weighted Random Early Detection (WRED)
Security	Storm Control Secure Shell TACACS+ Authentication, Authorization and Accounting
OAM	Two-way Active Measurement Protocol (TWAMP)
Manageability	CLI SNMP MIB NETCONF Zero Touch Provisioning (ZTP) Network Time Protocol (NTP)

## IP Infusion Advanced Network Services

IP Infusion offers a wide range of network services to help accelerate your success in deploying and optimizing the IP Infusion Cell Site Router solution. The Advanced Network Services offerings are delivered through a unique combination of people, processes, tools, and global system integration partners, and focused on increasing operating efficiency and improving network operation. IP Infusion Advanced Network Services uses an architecture-led approach to align your data center infrastructure with business goals to achieve long-term value.

IP Infusion Advanced Network Services resolve mission-critical problems with direct access at any time to IP Infusion network experts and award-winning resources. The Smart Call Home service offers proactive diagnostics and real-time alerts on your IP Infusion CSR solution. IP Infusion Advanced Network Services increase investment protection, optimize network operations, support migration operations, and strengthen your IT expertise throughout the entire network lifecycle.

## ABOUT IP INFUSION

IP Infusion, the leader in disaggregated networking solutions, delivers enterprise and carrier-grade software solutions allowing network operators to reduce network costs, increase flexibility, and to deploy new features and services quickly. IP Infusion is headquartered in Santa Clara, Calif., and is a wholly owned and independently operated subsidiary of ACCESS CO., LTD. Additional information can be found at <http://www.ipinfusion.com>

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