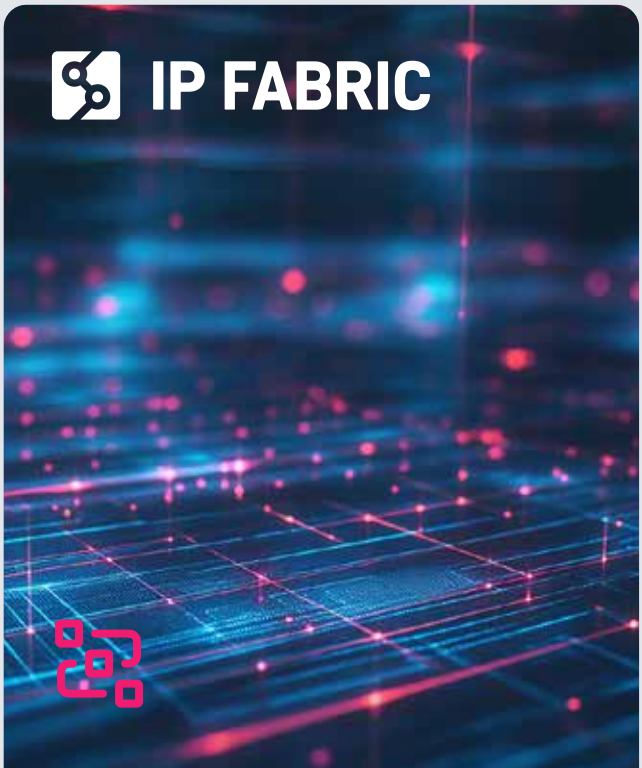
IP FABRIC



# PRODUCT DATASHEET 7.0



## Solution Overview

From routers to switches and firewalls to cloud infrastructure, IP Fabric continually discovers and snapshots your **whole network** so you can always answer the question, "What changed and where?" Remove fear, uncertainty, and doubt from daily deployments, migrations, mergers, and digital transformation. With newfound assurance and clarity comes trust. Teams from operations to architecture and systems to security gain the ability to plan, execute, and embrace change **confidently**. IP Fabric's network intelligence and deep understanding drive key outcomes such as:

- Operational stability, resilience, and efficiency
- Proactive security and compliance
- Reduced OPEX (Operational Expenditure)

> IP Fabric **understands** your network. It is the cornerstone of successful change, compliance, and automation practices. It empowers organizations and teams to deliver on their service promises by providing the most complete and flexible multi-vendor network assurance available.

### Unsurpassed Discovery, Visibility, and Validation

By snapshotting the **whole network** both before and after changes, teams can rapidly converge on root causes, discern deltas, and highlight regressions or missing redundancy. Combined with 150+ customizable intent checks, heterogeneous networks become queryable end-to-end with a single UI or API. Don't let technical debt compound, and ensure neither your network or teams are left in the dark.

> Imagine being able to do a multi-vendor end-to-end **path lookup** (via UI or API) to check reachability (routing / ACL / policy enforcement) either pre- or post-change. Add to a chatbot, use for large-scale path analysis, or append data/images to trouble tickets. Drive confident change!

## Documentation and Compliance

IP Fabric builds a **digital twin** of your network. This enables teams to converge their communication using shared views which accelerates collaboration. With a **true** view of the whole network and automated documentation for operations and compliance, more time and energy can be spent on higher-impact initiatives, objectives, and key results.

## A Foundation of Truth for Trusted Automation and Security

IP Fabric is a single point of truth. It observes network state, triggers network snapshots, validates changes automatically, and can also be used to enrich ITSM(IT Service Management) tickets. With an API-First approach and pre-built integrations for common Sources of Truth(SoT) and orchestration tooling (e.g., Netbox, Nautobot, Itential, Ansible, Nornir, and more), IP Fabric lays the foundations needed for accelerating change and innovation. See also the Python SDK / Postman collection.

## Deployed By You as a Virtual Instance

IP Fabric is deployed on-premises or in the cloud as a Virtual Machine(VM) via an OVA, QCOW2, or VMDK image. Please see the hardware requirements or licensing for **v7.x** as required.

# Features and Functionality

### Dynamic Network Visualization

- Diagrams are entirely interactive and automated.
- Leveraging ARP, STP, CDP, LLDP.
- Routing diagrams (RIBs; RIP, OSPF, OSPFv3, EIGRP, IS-IS, BGP, PIM).
- Switching diagrams (STP), MPLS diagrams (LDP, RSVP).
- VXLAN topology maps.
- Complete Host-to-Gateway application path simulation (MAC, STP, ARP).
- Complete End-to-End path simulation (inc. FEX, VSS, MAC, STP, ARP, MPLS, Multicast, VXLANs, VARP).
- Simulate using customizable packet headers with path inspector on the path.
- Analysing End-to-End for subnet reachability.
- Analysing End-to-End for port ranges, applications, regions inc. TTL.
- Wired and Wireless users and IP Telephony connectivity maps (inc. MAC, STP, ARP).

### Change / Configuration Management

- Change tracking for network connections, topology, and IP addresses.
- Configuration change tracking for managed network devices.
- Compare any two network snapshots, determining network state differences over time.
- Compare different configuration files.
- Flexible, complete snapshot comparison inc. over API.

### Automatic Documentation

- Detailed network inventory, including devices, modules, interfaces, and components.
- Fast and complete network infrastructure discovery.
- Low-Level Design (LLD) documentation for each site in MS Word format.
- User location and endpoint connectivity mapping
- Flexible API-to-PDF reports.
- Export diagrams to SVG, PNG, or Visio (VSDX) files.

### Network History

- Each network discovery creates a digital snapshot of the network.
- Snapshots can be compared, exported, imported, cloned,or archived elsewhere.
- Analyze the historical correlation between past and present states.
- Easily share specific snapshots and tables via URLs from the GUI.

### Accelerated and Continuous Audit

- Assurance dashboard with 150+ out-of-the-box intent rules.
- Detailed analysis of dynamic network protocol behavior.
- Expected state verification and in-depth analysis.

### Uncover Hidden Risks & Bottlenecks

- Network analysis reports in MS Word format.
- Verify network stability, resiliency, compliance and risk (inc. CVEs for NOS's).
- Transmission verification for loss / errors inc. interface counter details.
- Lifecycle milestone tracking inc. End of Sale / Maintenance / Support, for hardware.

### Tailored Functionality via Extensions

- Generate custom reports (e.g. DORA)

  Transform data in real-time (custom tables)
- Enrich data through external source integration
- Implement business-specific processing logic (global search)
- Deploy extensions with source code or containers

# IP Fabric Understands

From device inventory (inc. licenses and OS versions) to your network graph, IP Fabric makes sense of everything from the physical to the transport layer and more. By abstracting, normalizing, and then contextualizing configurations and state (from both your private and public cloud footprints), IP Fabric sees and records **the actual rather than the assumed** allowing for holistic and data-driven decision-making.

For example, IP Fabric understands/provides visibility of:

- **Core networking concepts/technology**: VLANs, trunks, interfaces/sub-interfaces (counters/errors), MTU, switch ports, virtual ports, link aggregation (inc. multi-chassis, vPC), PoE, QoS, ACLs, VRFs, clustering (inc. VSS), stacking, virtual contexts (inc. VSYS, VDOM, VDC)
- **Fundamental protocols** (inc. resolution and discovery): ARP, DHCP, IPv4, IPv6, NAT, SNMP, NTP, AAA, Syslog, CDP, LLDP, MPLS, LDP, RSVP, DMVPN, flow exports
- **Layer 2 loop prevention**: STP, rSTP, mSTP, PVST
- **FHRP(First Hop Redundancy Protocols)**: HSRP, VRRP, GLBP
- **Multicast**: PIM, IGMP snooping, PIM, RPs, multicast route/MAC tables
- **Overlay/layer 2 VPN services**: VXLAN, EVPN, VPLS, VPWS, CCC
- **Routing protocols**: BGP, EIGRP, IS-IS, OSPFv2/v3, RIP
- **Load balancing**: virtual servers, pools, nodes, F5 partitions
- **Cloud networks**: virtual machines/networks/interfaces
- **Wireless**: controllers, AP(Access Points), radio/BSSID, clients
- and a whole host more inc. vendor-specific technologies (see the **Vendor / Platform** list below)

# Vendor / Platform Compatibility List Constantly Expanding!

- Alcatel (AOS)
- Arista (EOS)
- AWS Networking (VPC, Transit Gateway, VPN gateway, NAT gateway, VPC peering, routing tables, Network ACLs, and Security Groups)
- Azure Networking (Vnets, Vnet gateways, NAT, routing, Security Groups)
- Brocade (ICX / FastIron)
- Checkpoint (Gaia / Gaia-embedded)
- Cisco (Catalyst, ISR, ASR, CRS, Nexus, ASA, WLC, SG, Firepower, ACI, ENCS, Viptela SD-WAN, SDA)
- Cisco Meraki (API discovery)
- Citrix (ADC / Netscaler)
- Dell (FTOS, OS10, Power Connect)
- Extreme (EOS, Enterasys, Avaya)
- F5 BIG-IP
- Forcepoint
- Fortinet
- FRRouting
- FS (Fiberstore)
- GCP (Google Cloud Platform)
- HP (Comware, Aruba switch, ProCurve, Aruba CX, Aruba Instant APs)
- Huawei
- Juniper (EX, MX, SRX, QFX)
- Juniper MIST
- Mikrotik
- Nokia
- Opengear
- Palo Alto (PAN-OS / Prisma SD-WAN)
- Quagga
- Riverbed
- Ruckus Wireless Controller
- Silver Peak SD-WAN
- Stormshield
- Versa Networks (VOS) SD-WAN
- VMware (NSX-T / Velocloud)

## Control Outcomes with IP Fabric

Regain trust in your network and enjoy the peace of mind that only successful change can bring. Defy uncertainty while increasing security and reliability.

Regain trust in your network and enjoy the peace of mind that only successful change can bring.
Defy uncertainty while increasing security and reliability. Explore IP Fabric at your own pace with a self-guided demo or free trial where you can also play with the interactive API documentation.

Self-Guided Demo

Free Trial

Alternatively, reach out with any questions or queries (no matter how technical) here.