



IP FABRIC



NetBox

Stale or incomplete documentation doesn't just slow down network automation—it introduces risk at scale. IP Fabric changes things by continuously discovering your actual network state, and comparing it with your intended state in NetBox.



Challenge

The key to successful network automation? Accurate documentation. But with the size and complexity of modern networks, your documentation starts degrading the moment it's created. And if you try to build automation or AIOps based on that outdated documentation, then the errors are sure to compound downstream—putting your network security, compliance, and operations at risk in the process.

To avoid this, you need:

- **A continuously updated view of your actual network state and behavior.**
- **A structured, verified feed of said data to fuel automation scripts.**



Solution

IP Fabric discovers every device, connection, and configuration in your network from core to cloud to edge. By comparing this discovery data with your NetBox instance, you can validate that your actual network state is in line with your intended network state, and surface any places where the two diverge.



Benefits

- **100% visibility:** Get a complete and accurate view of every device in your network, both known and unknown.
- **Automated syncs:** Sync IP Fabric and NetBox on an automated schedule, on demand, or after specified events.
- **AI-ready data:** Ensure that all network data is normalized and structured for automation scripts.
- **Unprecedented control:** Specify the models and snapshots included in each sync.
- **Ease of use:** Sync data seamlessly from multiple IP Fabric instances, and map IP Fabric fields to NetBox objects / destinations, all without needing any custom code.

Automate with Confidence

If you're using NetBox as your automation hub, you need a way to validate that all automated changes are operating in line with your security and compliance policies, as well as your overall intent. For example, if Netbox pushes an automated change, then IP Fabric can discover its effect on the network before syncing back with NetBox to confirm whether the change had the desired result.



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netbox

Sync the Data You Need, When You Need It

By default, IP Fabric will automatically sync NetBox with the most recent network snapshot. However, you can toggle this feature off for more controlled, point-in-time updates. You also have total control of when, and how often, you sync IP Fabric with NetBox; for example, you can choose to automate syncs on a regular schedule, run a sync on demand, or create webhooks to sync after a specific event occurs.

Govern With End-to-End Oversight

During data ingestion, NetBox doesn't automatically overwrite existing data. Instead, the plugin will simply create a new branch.

A separate "Changes" tab provides information on modifications that *would* be applied if the branch was merged, allowing for more proactive change management and governance. This foresight is also crucial for ensuring continuous security and regulatory compliance throughout both day-to-day changes as well as large-scale changes (like implementing automation and AIOps).

Transform Your Network Documentation

IP Fabric's NetBox plugin leverages "Transform maps" as part of the data ingestion process. Transform maps act as a bridge, normalizing disparate formats and data structures to ensure all insights are integrated seamlessly into NetBox.

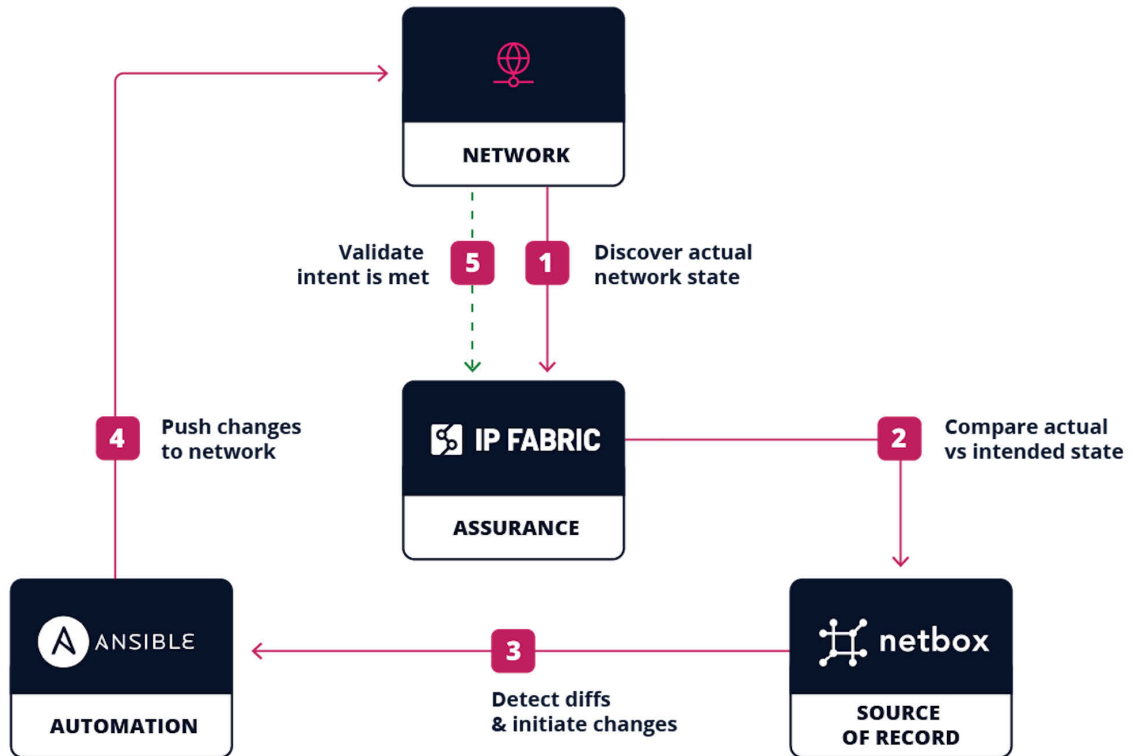
This feature also gives you the ability to map IP Fabric fields to specific NetBox objects / destinations, without needing any custom code. This allows for a more flexible, tailored approach to data syncs.

The screenshot displays the NetBox IP Fabric plugin interface. On the left is a sidebar with navigation links: Organization, Racks, Devices, Connections, Wireless, IPAM, VPN, Virtualization, Circuits, Power, Provisioning, Customization, Operations, IP Fabric, DATA SYNC, Sources, Snapshots, Syncs, Ingestions, CONFIGURATION, Endpoints, Filters, Filter Expressions, Transform Map Groups, Transform Maps, Transform Fields, Relationship Fields, Branching, and Admin. The main content area shows the 'IP Fabric Sources' page for 'Demo2'. It includes tabs for 'IP Fabric Source', 'Journal', 'Changelog', and 'Jobs' (12). The 'Data Source' section shows details for 'Demo2': Name, Type (Local), Status (Completed), Last synced (May 1, 2026, 1:36 p.m.), Description, and Base URL (https://demo2.eu.ipfabric.io). The 'Parameters' section shows Auth (masked), Verify (True), and Timeout (—). The 'Related Objects' section shows 'IP Fabric Snapshots' (12). Below this is the 'Sync Results' section, which shows a successful sync starting at 2026-05-01 13:36:08, lasting 0 minutes and 4.74 seconds. The results table lists the following entries:

TIME	LEVEL	OBJECT	MESSAGE
2026-05-01T13:36:08.754617+00:00	INFO	Demo2	Syncing snapshots from Demo2
2026-05-01T13:36:13.157093+00:00	INFO	Day 3 - FW bypass - 07-Feb-26 08:05:52 - 5ef44b70-b4ea-4246-b85f-878ef5723b41	Created/Updated Snapshot Day 3 - FW bypass - 07-Feb-26 08:05:52 (5ef44b70-b4ea-4246-b85f-878ef5723b41)
2026-05-01T13:36:13.168845+00:00	INFO	Day 3 - FW bypass - 07-Feb-26 08:05:52 - \$last	Created/Updated Snapshot Day 3 - FW bypass - 07-Feb-26 08:05:52 (\$last)
2026-05-01T13:36:13.180514+00:00	INFO	Day 4 - after migration - 07-Feb-26 02:31:16 - 9a94ffe6-e2de-48ef-ac88-2a61f829db52	Created/Updated Snapshot Day 4 - after migration - 07-Feb-26 02:31:16 (9a94ffe6-e2de-48ef-ac88-2a61f829db52)
2026-05-01T13:36:13.192568+00:00	INFO	Test Snapshot - 06-Feb-26 14:22:03 - 4d0cefd2-f227-4bed-b6a7-d7755379ca87	Created/Updated Snapshot Test Snapshot - 06-Feb-26 14:22:03 (4d0cefd2-f227-4bed-b6a7-d7755379ca87)
2026-05-01T13:36:13.204200+00:00	INFO	Day 1 - before migration - 06-Feb-26 14:22:03 - 99fce2a8-308a-4ea6-9c9c-7ca9dca22ff9	Created/Updated Snapshot Day 1 - before migration - 06-Feb-26 14:22:03 (99fce2a8-308a-4ea6-9c9c-7ca9dca22ff9)
2026-05-01T13:36:13.205036+00:00	INFO	—	Completed syncing snapshots from Demo2

Build a Reliable Automation Ecosystem

Below you'll find a reference architecture for network automation with IP Fabric and NetBox, including various tools and platforms that can be used at each stage.



Learn More

- Visit our [blog](#) for more information about our NetBox plugin.
- Have some questions or feedback regarding the NetBox plugin? Check out the [community slack channel](#) or [contact the IP Fabric team](#).
- Visit our [docs](#) for instructions on how to install the plugin, Transform Maps, and more.



About IP Fabric

IP Fabric is the leading network digital twin platform, delivering a continuously validated snapshot of your network behavior from core to cloud to edge. In addition to discovery, the platform also runs a series of automated intent checks across every device, connection, and configuration to ensure stability and security while also minimizing spend. By uncovering risks and providing normalized, actionable insights, IP Fabric empowers enterprises to accelerate IT and business transformation with confidence.



Don't Take Our Word For It!

See how IP Fabric can transform your approach to network management.

[Access Demo](#)



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