



IP FABRIC



NetBox | NetBox Cloud

Whether you're already automating your network processes, or just thinking about getting started, the IP Fabric to Netbox and NetBox Cloud plugin can help to simplify this mammoth and daunting task by providing you with an ideal Source of Truth to inform your decisions and keep you on the right path.



Challenge

Successful automation initiatives rely on accurate network documentation. After all, proper documentation equals proper visibility. With the inherent complexity of modern networks, and a reliance on manual documentation which introduces the risk of human error, it's difficult to sufficiently understand device configurations and connections, let alone the network as a whole.

You're missing:

- **An accurate, up-to-date and reliable source of information on your network, including state data for individual devices and;**
- **A way to collate and structure this information to properly feed automation scripts.**



Solution

The IP Fabric NetBox plugin streamlines the process of synchronizing data from IP Fabric straight into your NetBox instances, whether OSS or in NetBox Cloud - providing the necessary visibility and structured data to feed to automation scripts.

Tasks like configuration management, provisioning and optimization become simpler than ever before, accelerating processes while reducing manual errors. All of which leads to a more efficient network management process.



Benefits

- **Simplification** - Invaluable network visibility that simplifies accessing and viewing critical network information
- **Flexibility** - Specify the models and snapshots to import into NetBox and NetBox Cloud
- **Synchronization on-demand** - No need for real-time connectivity to IP Fabric's API
- **Options** - Seamless data synchronization from multiple IP Fabric instances
- **Structure** - Data is structured for automation scripts
- **Tailored to your data** - Leverage 'Transform Maps' to harmonize disparate data formats and structures for seamless integration

What's New With This Plugin?

Previously, IP Fabric data could be synchronized leveraging the IP Fabric API and NetBox API using external scripting. The plugin allows for a native NetBox experience, **letting users synchronize data without leaving the NetBox UI**. Furthermore, this plugin has been adapted to work with NetBox Cloud, meaning your cloud instances can be synchronized with the necessary visibility and data to empower your cloud-based automation initiatives.



IP FABRIC



netbox

Why Stop At One Instance?

The plugin allows for multiple instances of IP Fabric to be configured as NetBox sources, meaning data can be seamlessly synchronized, regardless of source.

For example, if running IP Fabric in a lab environment to test integrations and code upgrades, the lab network can be easily synchronized with a source of truth. For MSP's using one NetBox instance to manage multiple customers, each customer IP Fabric instance can be added.

Synchronize Depending On Your Needs

What's better than synchronizing accurate network state data into a NetBox instance to power automation? Being able to freely choose the data that NetBox ingests. From data contained in individual IP Fabric snapshots to network models, teams can update or create new NetBox models with the data they choose.

Complete Oversight

During data ingestion, NetBox doesn't automatically overwrite existing data. Instead, the plugin will propose branch changes like in GIT. After initiating synchronization, a new branch is created containing the proposed changes.

A separate 'Changes' tab provides information on modifications that **WOULD** be applied if the branch was merged – providing an oversight of how updates will change a NetBox database before finishing the job. Perhaps most importantly, this shows users their actual network state against the source of truth's intended state - verifying that source of truth information is as up to date as possible or automations are working as intended.

Transformative For Your Network Documentation

The IP Fabric NetBox plugin leverages transform maps as part of the data ingestion process. Why is this important?

Transform maps essentially act as a bridge – harmonizing disparate formats and structures of data to ensure that valuable IP Fabric network information is integrated seamlessly into a NetBox database.

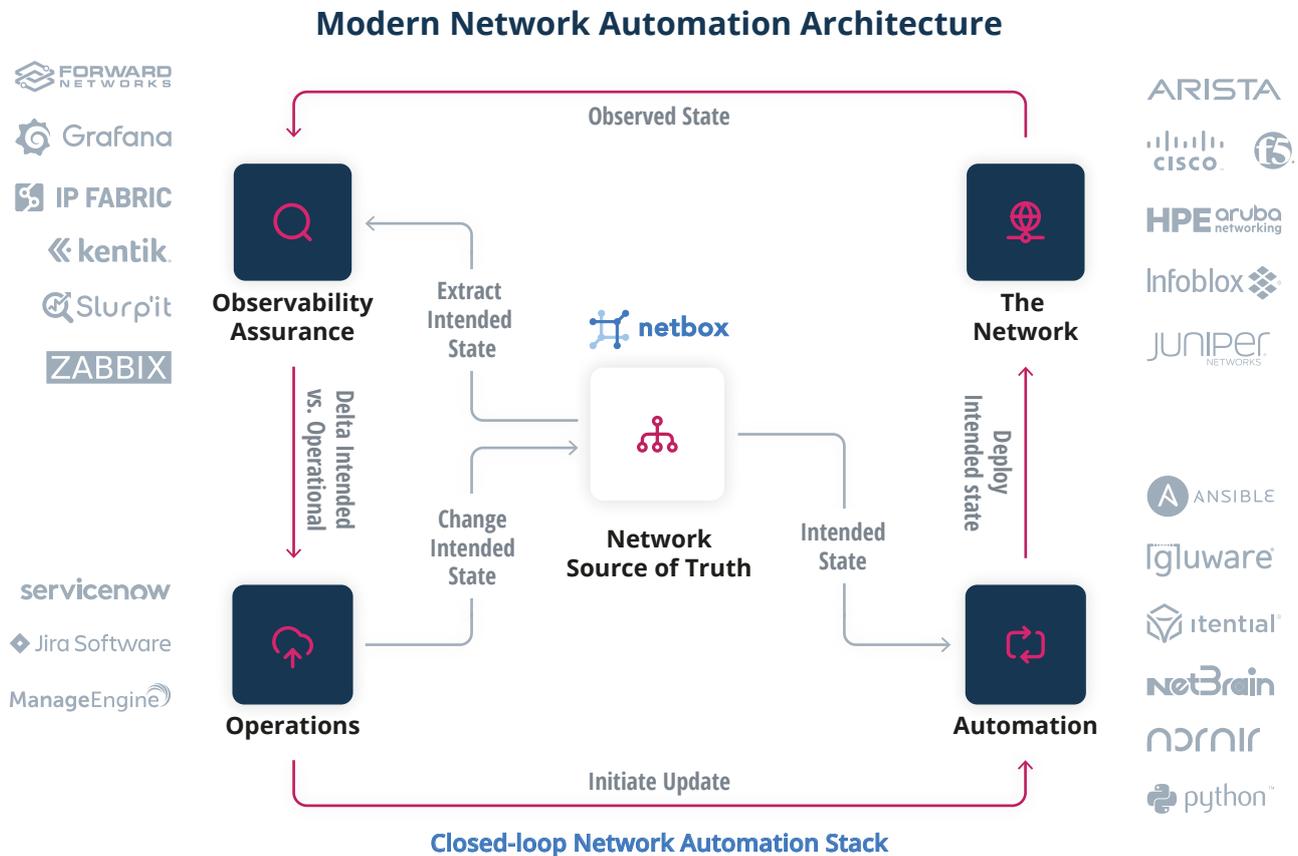
During development, our customers specified the ability to input specified data into specific NetBox fields as a valuable feature. With transform maps, this becomes reality and eliminates the need to undergo custom development to match a user's individual needs – providing flexibility and a tailored experience that lets users modify default transform maps and designate destinations as per their own requirements.

The screenshot displays the NetBox IP Fabric Sources interface. On the left is a navigation sidebar with categories like Organization, Devices, Connections, Wireless, IPAM, Overlay, Virtualization, Circuits, Power, Provisioning, Customization, Operations, and Plugins. The main content area shows the configuration for a 'Demo Instance' IP Fabric Source. It includes fields for Name, Status (Completed), Last synced (Oct 12, 2023 1:48 p.m.), Description, and URL (https://demo1.eu.ipfabric.io). There are also sections for Parameters (Auth, Verify), Tags, and Comments. Below this is a 'Sync Results' table with columns for Time, Level, Object, and Message. The table lists various sync operations, including firewall changes, ACI snapshots, and Azure backups, with their respective timestamps and messages. A 'Success' row indicates that the sync job for the Demo Instance is completed.

Time	Level	Object	Message
2023-10-12T13:48:18.374089+00:00	Info	Demo Instance	Syncing snapshots from Demo Instance
2023-10-12T13:48:23.697987+00:00	Info	Firewall change - 02-Feb-23 18:20:47	Created/Updated Snapshot Firewall change - 02-Feb-23 18:20:47 (6dc00568-a270-42e1-9812-af1c0b492cb1c)
2023-10-12T13:48:23.702949+00:00	Info	ACI - APIC_withAppEggSubnets - 15-Jun-22 07:51:27	Created/Updated Snapshot ACI - APIC_withAppEggSubnets - 15-Jun-22 07:51:27 (fbb0b956-7cd4-4929-b556-7bcb3098330)
2023-10-12T13:48:23.707145+00:00	Info	ACI - APIC_withAppEggSubnets - 15-Jun-22 07:51:27	Created/Updated Snapshot ACI - APIC_withAppEggSubnets - 15-Jun-22 07:51:27 (Start)
2023-10-12T13:48:23.711603+00:00	Info	S02 - Day 3 - Azure via backup - 27-Jan-22 11:59:40	Created/Updated Snapshot S02 - Day 3 - Azure via backup - 27-Jan-22 11:59:40 (22f62140-b1d2-433d-87d7-a26c67b521fd)
2023-10-12T13:48:23.716371+00:00	Info	S02 - Day 2 - Azure - 27-Jan-22 11:59:40	Created/Updated Snapshot S02 - Day 2 - Azure - 27-Jan-22 11:59:40 (48e238d-a490-43c7-a97f-855aebf0e422)
2023-10-12T13:48:23.720541+00:00	Info	S02 - Day 1 - Baseline - 26-Jan-22 22:59:15	Created/Updated Snapshot S02 - Day 1 - Baseline - 26-Jan-22 22:59:15 (d323b197-35b6-41e5-9a42-d4de9b38ccea)
2023-10-12T13:48:23.724870+00:00	Info	S01 - Day 2 - IPF Lab (clone) - 02-Jul-21 06:00:00	Created/Updated Snapshot S01 - Day 2 - IPF Lab (clone) - 02-Jul-21 06:00:00 (0a7018be-2004-4bcd-be83-05bbf79397c7)
2023-10-12T13:48:23.730101+00:00	Info	S01 - Day 2 - IPF Lab - 02-Jul-21 06:00:00	Created/Updated Snapshot S01 - Day 2 - IPF Lab - 02-Jul-21 06:00:00 (126d8c61-129c-431a-b98b-4c9211571f89)
2023-10-12T13:48:23.730750+00:00	Success	—	Completed syncing snapshots from Demo Instance
2023-10-12T13:48:23.732798+00:00	Info	Demo Instance	Sync job completed.

The NetBox Reference Architecture for Automation

Below you'll find NetBox Labs' reference architecture for modern network automation, including various commercial tools and platforms that can be used at each stage.



Learn More

- For more information on the plugin and transform maps, check out Solutions Architect Alex Gittings' handy blog breakdown [here](#).
- Have some questions or feedback regarding the NetBox plugin? Check out the community slack channel [here](#) - useful tips and tricks to maximize the many advantages this plugin has to offer are a click away.
- For instructions on how to install the plugin, transform maps and more, click [here](#).



About IP Fabric

IP Fabric is a vendor-neutral network assurance platform that automates the holistic discovery, verification, visualization, and documentation of large-scale enterprise networks, reducing the associated costs and required resources whilst improving security and efficiency.

It supports your engineering and operations teams, underpinning migration and transformation projects. IP Fabric will revolutionize how you approach network visibility and assurance, security assurance, automation, multi-cloud networking, and trouble resolution.



Don't take our word for it

See how assurance can transform your approach to network management.

[Access the demo](#)



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