Technology Overview: Dynamic Map

NetBrain® Integrated Edition

As humans, we use maps to understand and communicate complex information. Traditionally, IT teams have used maps and diagrams as the go-to visual aid for documenting the network. These maps are invaluable when considering design changes, demonstrating compliance, or troubleshooting complex problems.

Challenges of traditional mapping methods

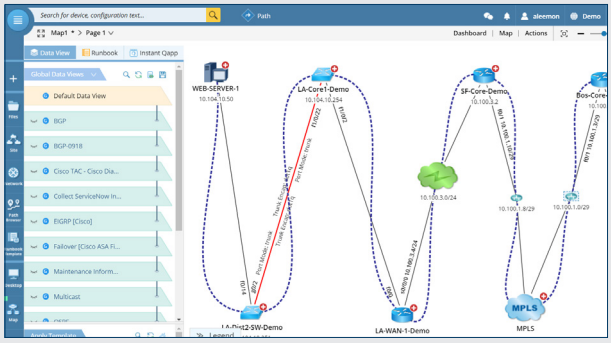
Unfortunately, most network teams struggle day-to-day without network visibility because tools like Microsoft Visio are no longer enough to accurately document their modern enterprise networks. There are three key reasons:

- **Manual to Create.** The traditional method of mapping is a manual 2-step process of collecting data and drawing the diagram.
- **Impossible to Keep Up-to-date.** Given the dynamic nature of modern networks, typical "static" diagrams are instantly outdated.
- **Never the Right Amount of Detail.** Traditional diagrams are either too bare or too cluttered to help with most tasks.

Introducing Dynamic Network Maps

Dynamic Maps represent the evolution of network diagrams, akin to a GPS mapping system for the network. A Dynamic Map is an intelligent user interface for accessing virtually any network data. It is used as the input and output for driving network automation.

A Dynamic Map leverages a deep, intelligent discovery engine and data from multiple sources. The result is a custom map that can be created on demand using live network data, providing only the amount of data relevant for the task at hand.



Automate Mapping

With On-Demand Mapping, you can finally say goodbye to incomplete, outdated, and manual network diagrams. Now, the right map for any task is available with just a few simple clicks.

Visualize Any Data

Data Views provide a method to display device and interface data from many sources. Toggle Data Views on or off to decode network design, or access data from your other network tools.

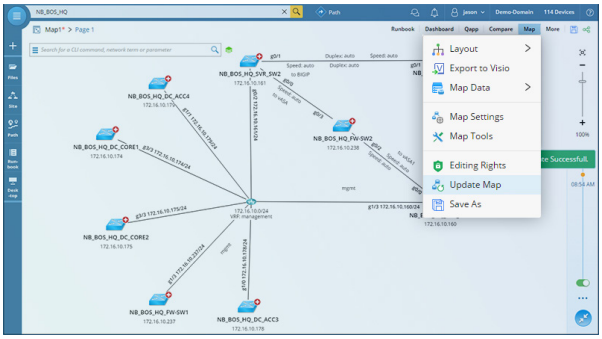
Accelerate Troubleshooting

Many network issues require troubleshooting between two endpoints. NetBrain's A/B Path Calculator can instantly map any path across the network. The resulting map is a powerful troubleshooting console.

NetBrain Dynamic Maps

Always Up-to-date

Dynamic Maps are powered by a deep discovery process and a mathematical model that creates a digital twin of the live network. This digital twin is kept up to date with regularly scheduled benchmarks. So as changes are carried out in the network, they are updated automatically on each map. Whether a Dynamic Map is used for documentation, troubleshooting or identifying design changes for a project, it is always update-to-date.



Task	Input	Output
Troubleshoot a slow application	Input **source** and **destination** addresses	Dynamic Map with application path identifying each hop
Find and disable an infected server	**Search for the server** and map adjacent LAN environment	Dynamic Map with server identifying all connections
Troubleshoot a ServiceNow ticket	**Auto-Trigger a diagnosis** via ServiceNow API integration	Custom Dynamic Map specific to devices identified in ServiceNow ticket

A Custom Map for Any Task

With NetBrain, every task starts and ends with a highly customized map. A Dynamic Map targets the specific part of the network and can then present the relevant information required for that task. Essentially, Dynamic Mapping enables access to the right map, with the right level of context, at exactly the right time for assisting network teams with critical tasks.

A Smart Data Container

Data Views are customizable device-based "data containers" that can be toggled on or off for displaying or hiding layers of information — such as data from configurations, CLI outputs, or other network management systems, via API. Used to decode network design, visualize open tickets, or understand network performance, Data Views power a true "single pane of glass" experience for virtually any network management task

Dynamic Map: A New Type of User Interface

With NetBrain, Dynamic Maps are the user interface for visualizing network information in the context of any task. Through a deep discovery process, NetBrain collects thousands of data points to build a digital twin of the live network.

A Dynamic Map provides a single console for the automation of virtually any network task - compliance checks, troubleshooting common issues, validating changes, and much more. This automation is powered using Executable Runbooks - predefined workflows which are created without scripts.