Collect, Trace or Target?

What are the distinctions among these options?

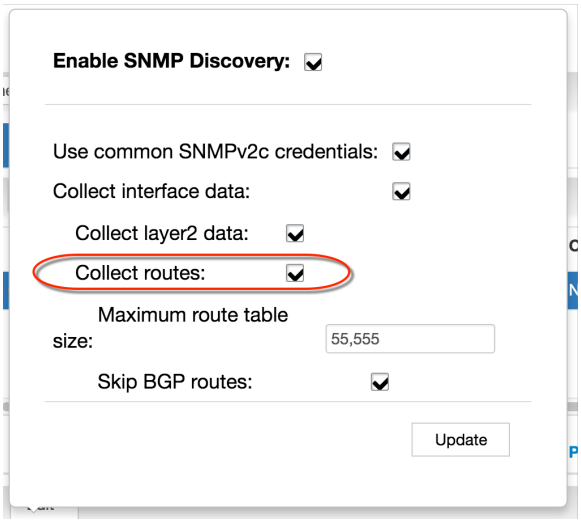
In SNMP Discovery, you can configure Lumeta to Collect Routes. In Path Discovery, you can have it Trace to Discovered Routes and in Host Discovery, Target Discovered Routes.

- SNMP - Collect Routes
- Path - Trace to Discovered Routes
- Host - Target Discovered Routes

Collect Routes

What are the distinctions among these configuration options? How are they associated with Recursive Indexing and Path Looping (known as ND Looping in Lumeta IPsonar). This page provides answers.

When you select the SNMP > Collect Routes option, it means that you want Lumeta's SNMP discovery agent to collect route tables from devices when it can do so.Sometimes Lumeta's SNMP agent may be able to get a response back from a device, yet not be able to collect routes from the device. This may occur for several reasons. Sometimes a device will be an SNMP-responder yet not have a route table to give. Sometimes it has a route table, but will not release it. Sometimes the device will respond to SNMP but not with the credentials input in the SNMP tab.



The SNMP discovery agent can also collect or skip route tables from BGP routers. The field is labeled "Skip BGP" rather than "Collect BGP" because Border Gateway Protocol (BGP) routers are likely to be Internet-facing. These BGP routers often hold very large routing tables that are irrelevant to your network; collecting these routing tables is typically time consuming and does not provide useful information.

The Maximum Route Table Size option is another mechanism that, like Skip BGP, stops Lumeta's discovery agent from wasting time collecting routing tables that do not provide useful information.

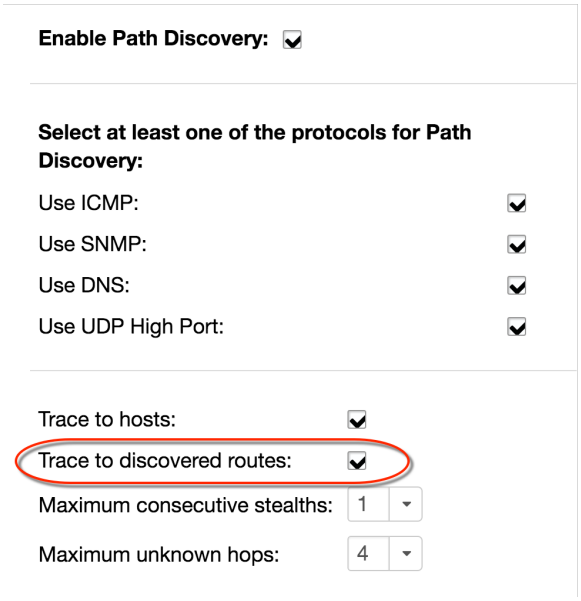
When Lumeta collects SNMP-discovered routes, the routes are evaluated against the Target list for potential further indexing. Lumeta stores the gathered information for use in generating dashboards, reports, and maps.

SNMP discovery does have dependencies on other types of discovery. If you simply enable SNMP, nothing will happen. Specific IP addresses are needed for SNMP Discovery to do its job. As a result, Path Discovery or Host Discovery must be configured for SNMP results to be meaningful. Proper SNMP credentials must be supplied.

Whatever data SNMP collects is essentially dormant until a Path Discovery (Trace to Discovered Routes) or Host Discovery (Target Discovered Routes) option triggers action on it.

Trace to Discovered Routes

When Lumeta *traces* to a discovered route, the discovery engine's purpose and interest is centered on what can be discovered along the path to the discovered route's endpoint. The endpoint IP is not of interest. When Lumeta "goes after" a target in a trace scenario, whether the endpoint IP actually exists is of negligible consequence. Again, Lumeta's is made to focus on what data can be collected in the course of tracing to an assumed destination.



Target Routes

To target is to test. The target is the subject of our investigation. It's the thing we want to learn about. When a discovered route is targeted, however, the discovery engine's purpose is to discover all it can about that particular targeted host.

In terms of how Lumeta does its job, the difference between "tracing" and "targeting" amounts to where data collection takes place, what data is collected, how that data is reported, and how long the process takes. Tracing is a faster and uses less computing resources than targeting, so favor tracing when you can use either. The joy is in the journey, one might say about trace indexing, whereas with targeted indexing, the joy is in the destination. Lumeta provides both options. Targeted Indexing is considered a third type of discovery, along with Active and Passive.