Mako Networks

API Introduction

June 2025 v1.8.1

Document Purpose

This document outlines the general capabilities and operations of the Mako Networks API within the Mako central management system (CMS).

Document History

Version	Comments
1.8.1	Initial Public Release

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Overview

The Mako Central Management System (Mako CMS) offers two types of API for third party integration: Push APIs and Pull APIs.

Webhooks and Data Streams are Makos' Push API. With this API, the Mako CMS will proactively push out in near real-time alerts, configuration changes, state changes, and logs to endpoint URLs of your choosing. In Mako API terminology, Webhooks are used to send alert and configuration events, while Data Streams are used to send logs and sensor/telemetry data.

Mako Service API is Makos' Pull API. With this API, you can query the Mako CMS on-demand to retrieve status information, run diagnostics, make changes, and provision sites and their Mako devices.

API Use Cases

There are many possibilities on how to use the API. Here are some of the most common ones:

- Integration with centralised SIEM tools like Splunk for centralised logging.
- Integration with helpdesk ticketing systems for automated and proactive alert management.
- Integration with CRM, provisioning tools, and other logistics tools.
- Integration with centralised dashboards.
- Run automated, pre-emptive issue investigation upon a failure.
- Monitoring ATG fuel tank levels, alarms and deliveries.
- Monitoring Internet circuit speed and quality.
- Monitoring and alerting on VPN outages.

Mako Service API Overview

The Mako Service API offers the following subsections

API Subsection	Description
Company Management	Allows for the creation and management of Companies.
Site Management	Allows for the creation and management of Site profiles.
Mako Management	Allows for the creation and management of Mako device profiles.
User Management	Allows for the creation and management of Mako CMS user accounts.
VPN Cloud Management	Supports some management of VPN Cloud configurations
Metadata Management	Allows for the assignment and listing of metadata for Mako devices, Sites, and Companies.
Labels Management	Allows for the assignment and listing of labels for Mako devices, Sites, and Companies.
Mako Status	Provides the latest status information about Makos, covering:

	• Online status • Contact IP • Device State (see Device State Streams)
Diagnostics	Provides live, real-time diagnostic access to Mako devices. Includes the ability to view live VPN status information, and to instruct the devices to restart their VPNs or reboot the entire device.

Webhooks and Data Streams Overview

Type	Description
Alert Webhooks	Alerts include an important state change on the Mako device, such as: • Going online/offline • Changing which WAN is in use • Firmware updates
Configuration Event Webhooks	Configuration events include changes to the Mako device, Site or Company.
Log Streams	Logs include syslogs, firewall logs, and IDS logs. Typically sent in 10-minute intervals.
Device State Streams	Device State date is a point in time snapshot of core aspects of the Mako device, such as what WANs and LANs are up, what is the default route, what firmware it is running, how many VPNs are up/down, and more.
Mako Device Traffic Streams	Traffic logs include bytes sent/received on each port on the Mako device. Typically sent in 10-minute intervals.
PC Traffic Streams	End User (PC) traffic logs include the bytes sent/received to each destination IP/port for each end user machine, identified by MAC address. Typically sent in 10-minute intervals.
Speed Test Result Streams	Speed Test Results contain the latest measured link throughput, latency and jitter for each tested WAN . Typically sent once a day, subject to testing schedule.
ATG Data Streams	ATG data includes a variety of data points polled at various frequencies throughout the day. Key data points include: • Inventory • Deliveries • Alarms

Supporting Documentation

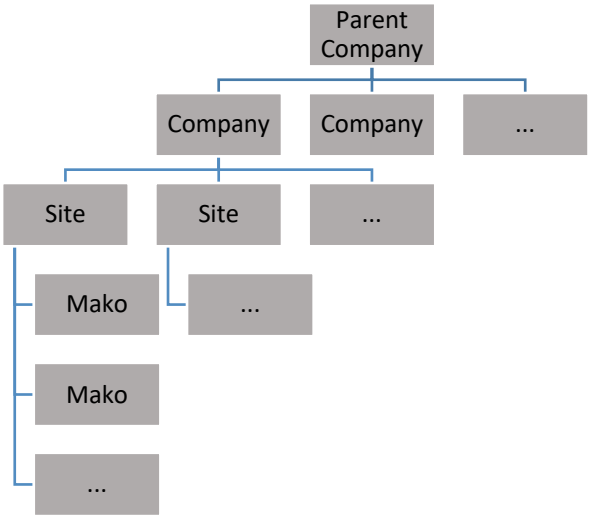
API	Documents
Mako Service API	openapi.json – API schema in JSON form mako-api.html – API schema in HTML form mako-api-guide.html – API usage instructions
Webhooks and Data Streams	Mako Networks Webhooks API Technical Specifications.pdf

CMS Hierarchy

The Mako CMS is structured in a hierarchical fashion, with different types of entities at each step.

A company can have multiple companies under it, and each company can have multiple sites. A site represents a location where one or more Mako Devices are installed. In most cases these will be physical locations, such as a retail environment or data centre. In some cases, it will be a virtualised environment like GCP, AWS, etc.

Mako Networks offers multiple hardware product lines, and it's typical for a site to include a selection of them, such as a Security Gateway, some Managed Switches, and some Access Points.



Entity Identification

Mako Devices, Sites, and Companies comprise the primary identifiable components of user environments. All entities have a unique, UUID-based, identification. Some entities offer additional identification fields.

Identification	Data Type	Description
Mako Global ID (aka CPE ID)	UUID	A hardware-independent identifier. It uniquely identifies the Mako Device profile within the Mako CMS. If a Mako Device fails or is swapped out, the Mako Global ID will remain unchanged while the Mako MAC Address will change. The Mako Global ID is issued by the Mako CMS and cannot be changed.
Mako MAC Address	MAC Address	A hardware-specific identifier. It uniquely identifies a physical Mako Device. If a Mako Device fails or is swapped out, the Mako MAC Address associated with the Mako Device profile will change. The MAC is presented as colon-separated, i.e. XX:XX:XX:XX:XX:XX. Where possible, use the Mako Global ID as the Mako identity rather than the Mako MAC Address.
Site ID (aka Site Reference)	User-defined String	An optional user-defined freeform identifier that can identify a specific site location within the end-users own management systems. The Site ID cannot be changed once set except by Mako support.
Site UUID	UUID	The Site UUID is issued by the Mako CMS and cannot be changed.
Company UUID	UUID	The Company UUID is issued by the Mako CMS and cannot be changed.

Additionally, the Mako CMS supports user-defined labels and metadata associated with Mako Devices, Sites, and Companies. These can be configured in the Mako CMS directly, or programmatically via the Mako Service API. Labels and metadata are included in Webhooks and Data Stream payloads.

It is strongly encouraged to use persistent identifiers (Mako Global ID and Site ID) over the temporal Mako MAC Address, which can change if there is a hardware swapout or upgrade.

Push vs Pull and Data Reconciliation

Between the Push and Pull APIs, an integrator can build up a view of an estate (such as a dashboard) through event-driven webhook notifications and periodically pull the most recent data to sync up any missed data.

The Webhook notifications provide the fastest mechanism to receive notifications about state changes, and are the most performant way to keep track of an estate, avoiding the need to continuously fetch the entire estates status via poll and determine what changes have occurred.

A longer-interval periodic fetch of all status information is still recommended for data reconciliation, but does not have to be frequent (e.g. once every 15-20mins).

Dashboards

A common request is to build a dashboard to display the status of all devices within another reporting tool. One way to achieve this:

- Webhook: Receive *MAKO_IS_ONLINE* and *NOT_HEARD_FROM_MAKO* webhook events when a Mako device goes online/offline.
- Service API: Call *getMakoOnlineStatusByCompanyAndCustomers/{companyId}* once every 15 minutes to sync the online status.

A more comprehensive dashboard may wish to integrate other state information, such as which Internet connection is active, what the site's speed and latency is, how many VPNs are up, etc.

- Data Stream: Receive Speedtest Data Streams each time a speedtest is conducted
- Data Stream: Receive Device State Data Streams each time the state on the Mako device changes. This includes when the active VPN count changes, and each time the active WAN changes (i.e. switching between primary and secondary Internet connections).
- Service API: Call *getMakoDeviceStateByCompanyAndChildren/{companyId}* once every 15mins to sync which Internet connection the Mako device is currently using, and how many VPNs are online.
- Service API: Call *getVpnCloudConnectionsDiagnostic/{makoId}* and *getIpsecStatusByMako/{makoId}* to identify which VPN Cloud tunnels are down.