SHIELDSPHERE · MODULE & WORKFLOW GUIDE

Integration API
connect the systems your crews already use

How to issue API keys, let another system read your safety data and send records in, and get notified the moment something happens.

Version 1.0 | Admin Guide · for administrators | Screens captured August 2026

WHAT'S IN THIS GUIDE

The ShieldSphere Integration API lets another system read your safety data and send records in over HTTPS. An organization owner issues a scoped API key in Settings, hands it to whoever builds the integration, and that system can then pull employees, incidents, assets, chemicals and hazard scans, or push new records and photos for AI analysis.

1 What the Integration API does

One key, one set of endpoints, and the systems your company already runs can talk to ShieldSphere without anyone retyping data.

`Settings → Developers`

Most safety data starts life somewhere else. Your roster lives in a payroll system, your equipment in a maintenance platform, your field observations in whatever your superintendents carry. The Integration API is how those systems and ShieldSphere stay in step without a person in the middle copying records across.

Read your data

Locations, employees, OSHA incidents, assets, chemical inventory, and hazard scan results - queried on demand or synced on a schedule.

Send records in

Create employees, incidents, assets and chemicals, or submit a hazard photo and get an OSHA analysis back.

READ AND CREATE ONLY - NEVER EDIT OR DELETE

An outside system can add records and read them back. It can never change or remove anything. Corrections happen in ShieldSphere, where the audit trail lives, so there is never a question about which system holds the truth. A compliance record that an integration could quietly rewrite is not much of a record.

AVAILABILITY

The Integration API is part of the Enterprise plan. If you do not see a **Developers** section in Settings, it is not switched on for your organization yet - contact ShieldSphere and we will enable it.

Everything in this guide is done by an **organization owner**. Issuing a key grants standing access to your compliance data, so it is deliberately restricted to the single owner account rather than to every administrator.

2 Words you'll see

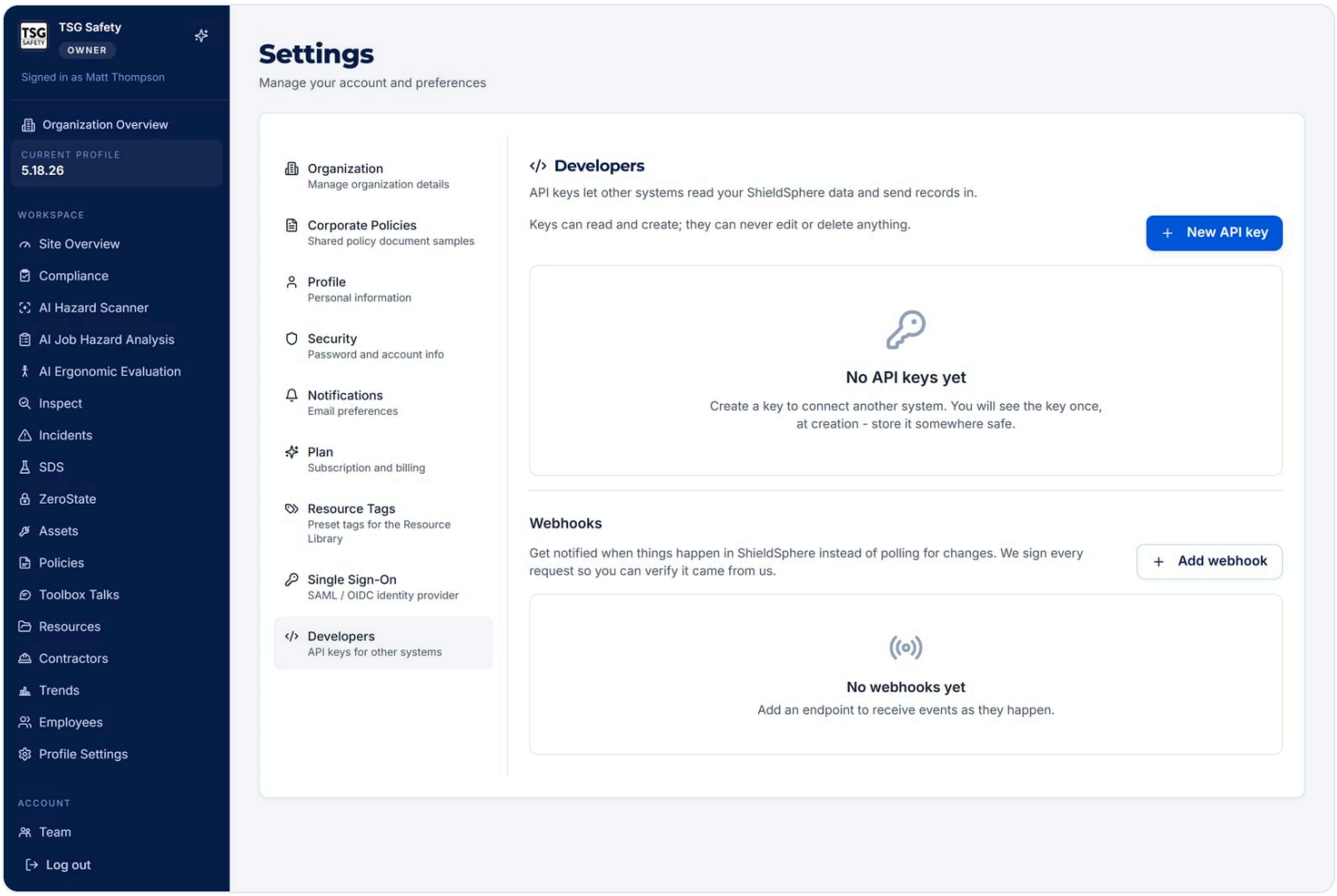
Nine terms cover everything in this guide. Skim them once and the rest reads easily.

TERM	WHAT IT MEANS
API key	The secret string an outside system sends to prove it is allowed to talk to your ShieldSphere data. You see it once, when you create it.
Permission	One thing a key may do, such as "Read incidents" or "Create employees". A key carries only the permissions you tick.
Location scope	An optional restriction to one site. A scoped key cannot see any other location's records, no matter what it asks for.
Endpoint	One address the other system calls, such as `/api/v1/incidents`.
Idempotency key	A label the other system attaches to a write so that retrying it cannot create the record twice.
Job	Work that takes longer than a single request - hazard photo analysis. You get a job id immediately and check back for the result.
Webhook	A URL of yours that ShieldSphere calls when something happens, so the other system does not have to keep asking.
Signing secret	The secret used to prove a webhook really came from ShieldSphere and was not forged.
Request id	An identifier on every response. Quote it to support and we can find the exact request in our logs.

3 Issuing an API key ADMIN

Decide what the key may do and which sites it may see, then hand the secret to whoever is building the integration.

`Settings → Developers → New API key`



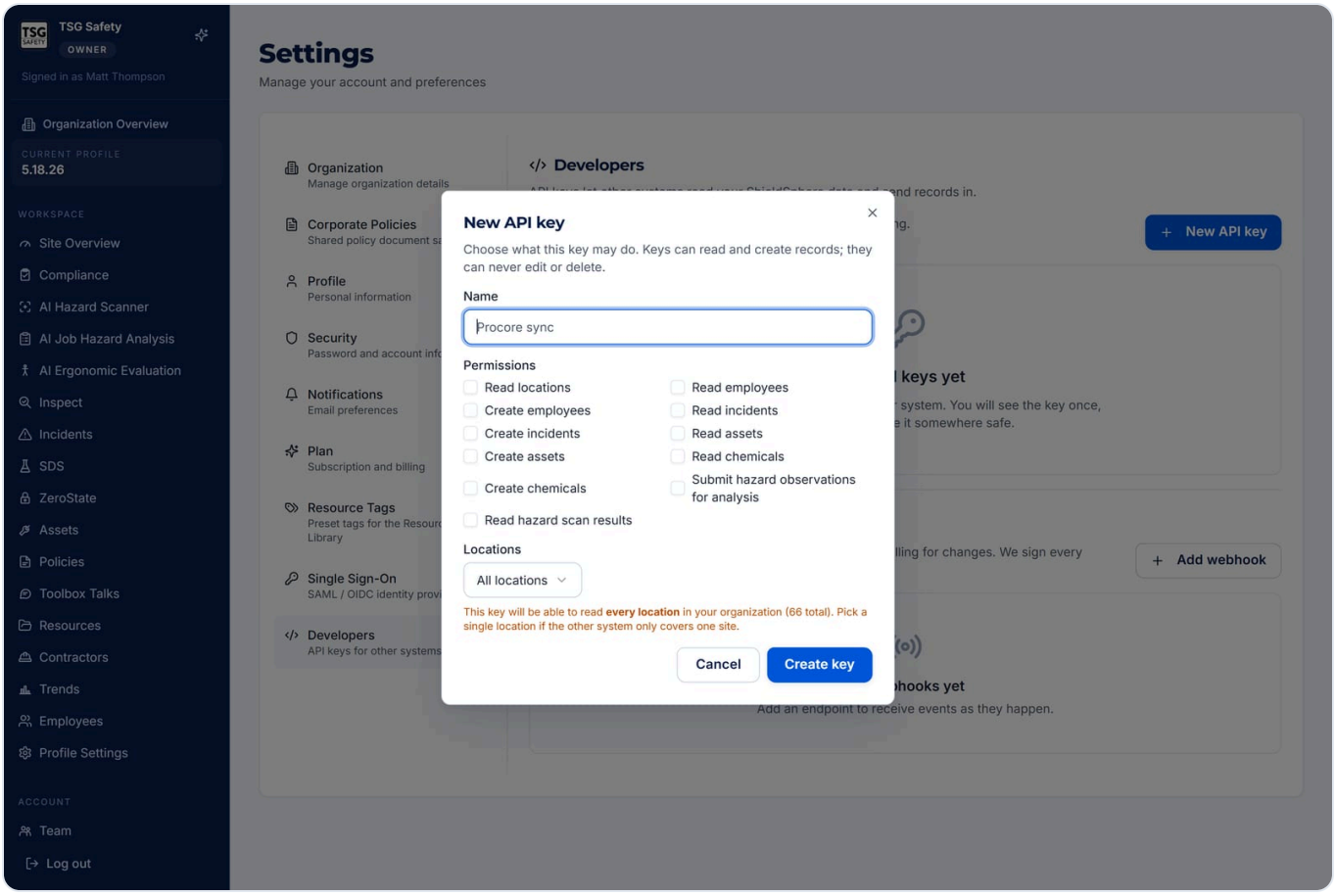
The Developers section. API keys on top, webhooks underneath. Both start empty - this is where every integration begins.

1 Open the Developers section

Go to **Settings** and choose **Developers** in the left-hand list. If it is not there, either the API is not enabled for your organization or you are signed in as an administrator rather than the owner.

2 Name the key for where it will live

Click **New API key**. Name it after the system that will use it - "Procore sync", "Payroll nightly import" - not after a person. Keys outlive the people who set them up, and in six months the name is all you will have to go on.



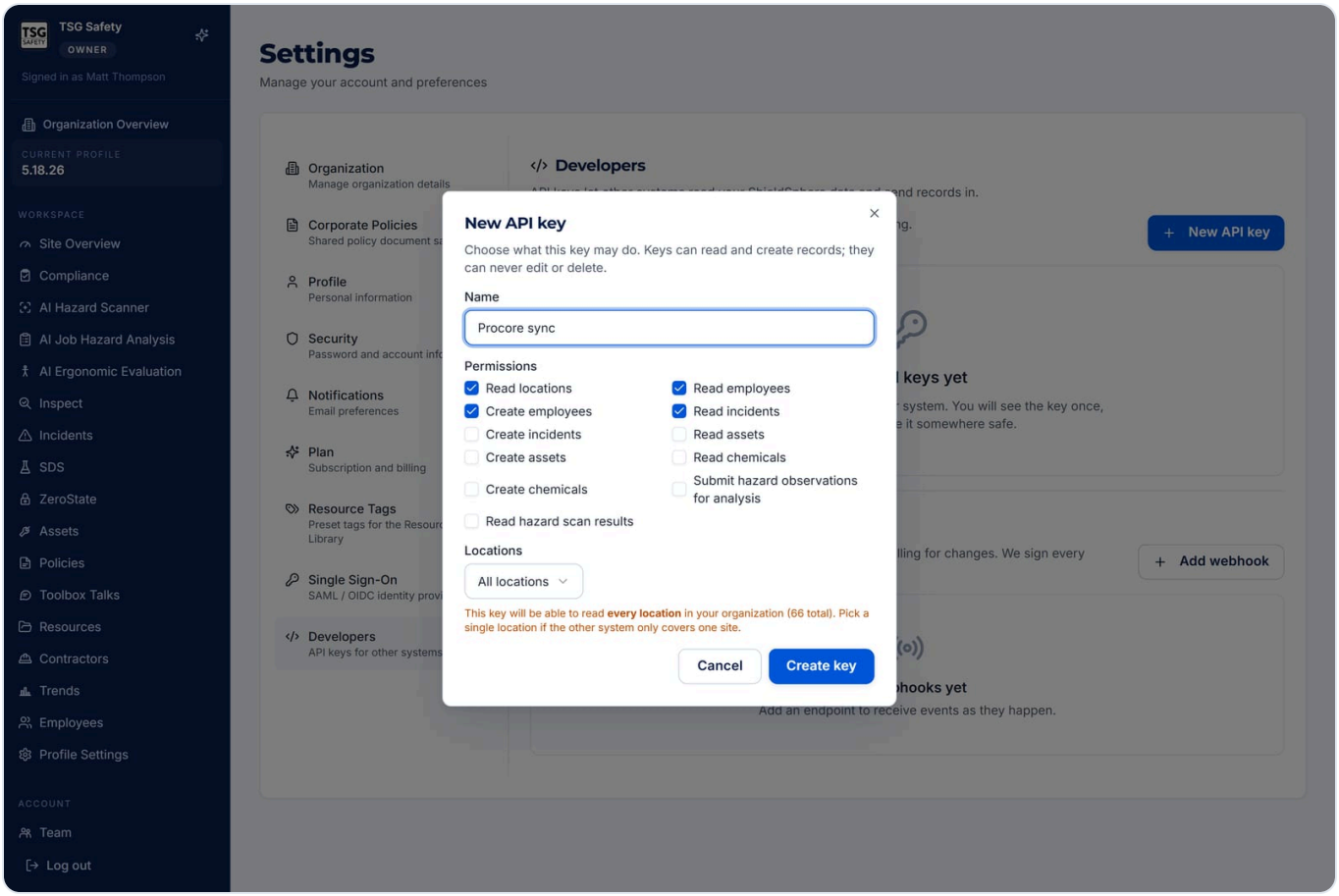
A fresh key. Nothing is ticked by default, so a key can only do what you deliberately allow.

3 Tick only the permissions that system needs

Each permission is one capability. A dashboard that only displays incident counts needs **Read incidents** and nothing else. Grant the smallest set that does the job - you can always issue a second key later, and a narrow key limits the damage if it ever leaks.

4 Restrict it to one location when you can

If the other system only covers one site, pick that site in **Locations**. The key then cannot read anything from your other locations even if it asks. Leave it on **All locations** only when the integration genuinely spans the whole organization.



Named, scoped, and warned. Four permissions ticked. The amber line spells out that **All locations** means every site in the organization - it appears whenever the key is not narrowed to one.

5 Copy the key before you close the dialog

Click **Create key**. The full key appears once. Copy it straight into the other system's configuration, or into your password manager. Closing the dialog is the last time that value exists anywhere outside the system you paste it into.

SHOWN ONCE, AND ONLY ONCE

ShieldSphere stores only a one-way fingerprint of the key, so we genuinely cannot show it to you again or recover it. If it is lost, revoke that key and issue a new one - see section 8.

SENDING THE KEY TO A DEVELOPER

Treat it like a password: use your password manager's sharing feature, not email or chat. Anyone holding the key can read whatever it permits, from anywhere.

After creation the list shows each key by name, along with the first few characters of the secret so you can tell several keys apart, its permissions, whether it is limited to a location, and when it was last used. A key that has never been used is worth chasing - it usually means the integration was never finished.

4 Reading your data

What the other system can pull, and the one thing to tell whoever builds it.

This section is for the person writing the integration. Six collections are available, each returning JSON:

ENDPOINT	RETURNS
/api/v1/profiles	Your locations. Fetch these first - most other calls need a location id.
/api/v1/employees	The roster. Active employees by default.
/api/v1/incidents	OSHA recordable incidents.
/api/v1/assets	Equipment and its inspection status.
/api/v1/chemicals	Chemical inventory by location.
/api/v1/scans	Hazard scan results, with findings on the single-scan endpoint.

The key travels in a header on every request:

```
Authorization: Bearer ss_live_your_key_here
```

Results come back in pages, oldest first, with a cursor for the next page. Passing `updated_since` with the timestamp of the last run returns only what has changed, which is what makes a nightly sync cheap.

> **WHAT NEVER COMES BACK**
>
> Some data is withheld from the API by design, regardless of permissions: the medical detail on an OSHA 301 form (home address, date of birth, treating physician), deleted records, and incidents still awaiting a safety manager's review. Privacy-case incidents return with the employee name replaced by "Privacy Case", as OSHA requires.

FULL TECHNICAL REFERENCE

Endpoint-by-endpoint documentation, request and response shapes, and a machine-readable OpenAPI file live at **shieldsphere.ai/developers**. Point your developer there rather than transcribing details out of this guide.

5 Sending records in

Outside systems can create employees, incidents, assets and chemicals - and one habit prevents the only serious mistake available here.

Creating a record is a POST to the same address you would read it from. The response carries the new record's id, and for incidents also its OSHA case number.

ALWAYS SEND AN IDEMPOTENCY KEY ON WRITES

Networks drop responses. If a write appears to fail and the other system retries it, an idempotency key is what stops a second record being created. This matters most for incidents: OSHA case numbers run in sequence, so a duplicate consumes a number that cannot be reclaimed, and deleting the extra record leaves a permanent gap in your 300 log.

Incidents accept partial information. OSHA allows seven days to complete a 301 form, so the other system can send what it has - location, date, description, employee name and classification - and someone finishes the record in ShieldSphere later.

DUPLICATES ARE FLAGGED, NOT MERGED

If an incoming employee matches one already on your roster by email, the request is refused rather than silently merged. The other system reports the conflict and someone decides - the same rule the bulk spreadsheet upload follows.

6 Hazard photos from the field

Send a photo of a work area and get the same OSHA analysis the AI Hazard Scanner produces in the app.

This is the capability most worth building an integration around. If your crews already record observations with photos somewhere else, that system can hand each photo to ShieldSphere and receive back a list of likely hazards with OSHA citations and corrective actions - without anyone re-uploading anything.

Analysis takes longer than a web request should wait, so it works in two steps. The other system submits the photo and immediately receives a job id. A few moments later it asks for that job and gets the findings, along with a scan id so the result also appears in your ShieldSphere scan history like any other scan.

DUPLICATE SUBMISSIONS ARE FREE

If the other system sends its own record identifier along with the photo, resubmitting the same observation returns the original analysis instead of running a second one. Worth setting up: each analysis is real work, and this stops a retry loop from repeating it.

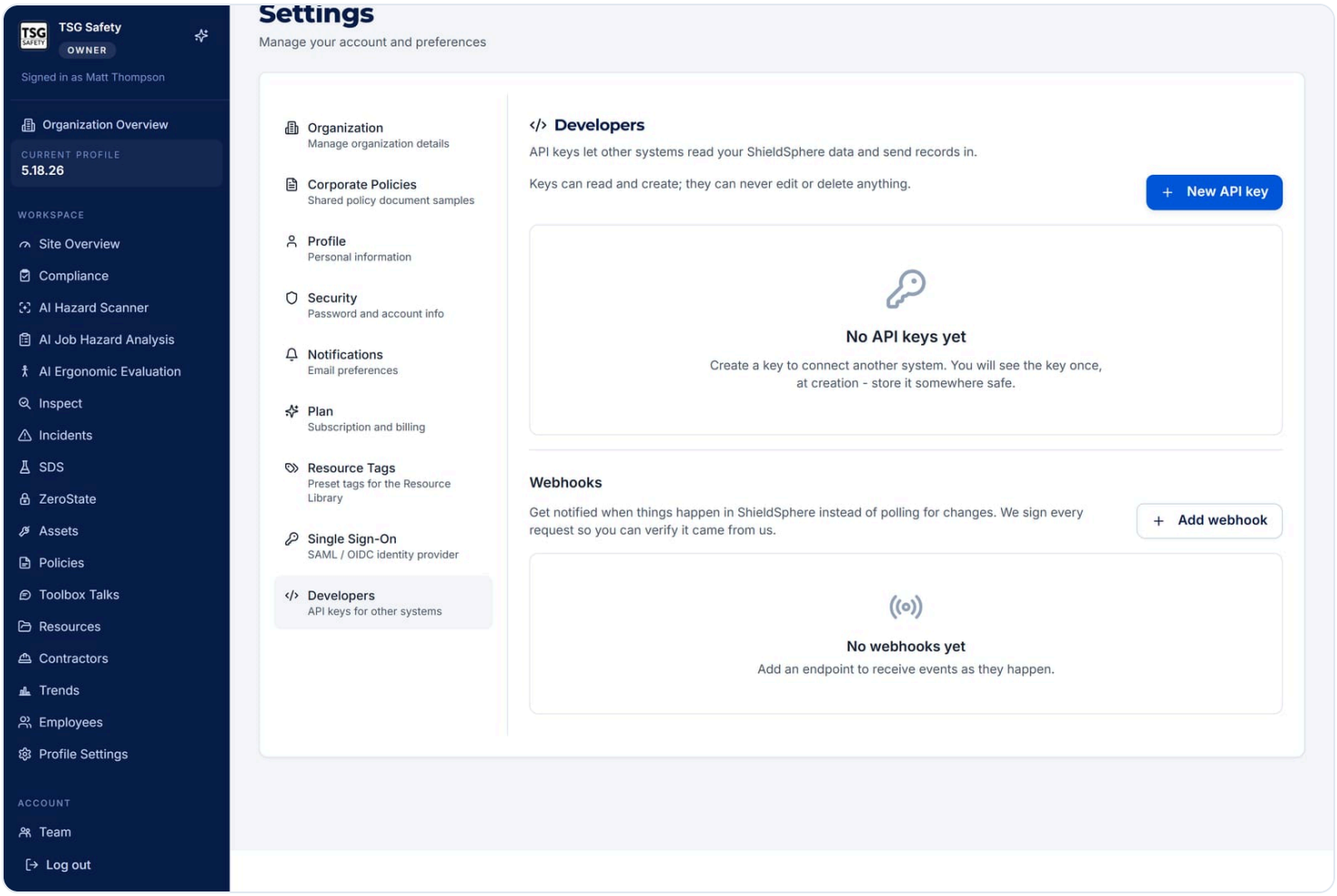
FINDINGS ARE A FIRST PASS

The analysis is AI-generated. Treat it as a trained observer's opening assessment - a prompt for someone to look, not a compliance determination. Every finding carries a confidence level.

7 Webhooks ADMIN

Instead of another system asking "anything new?" every few minutes, ShieldSphere tells it the moment something happens.

`Settings → Developers → Add webhook`



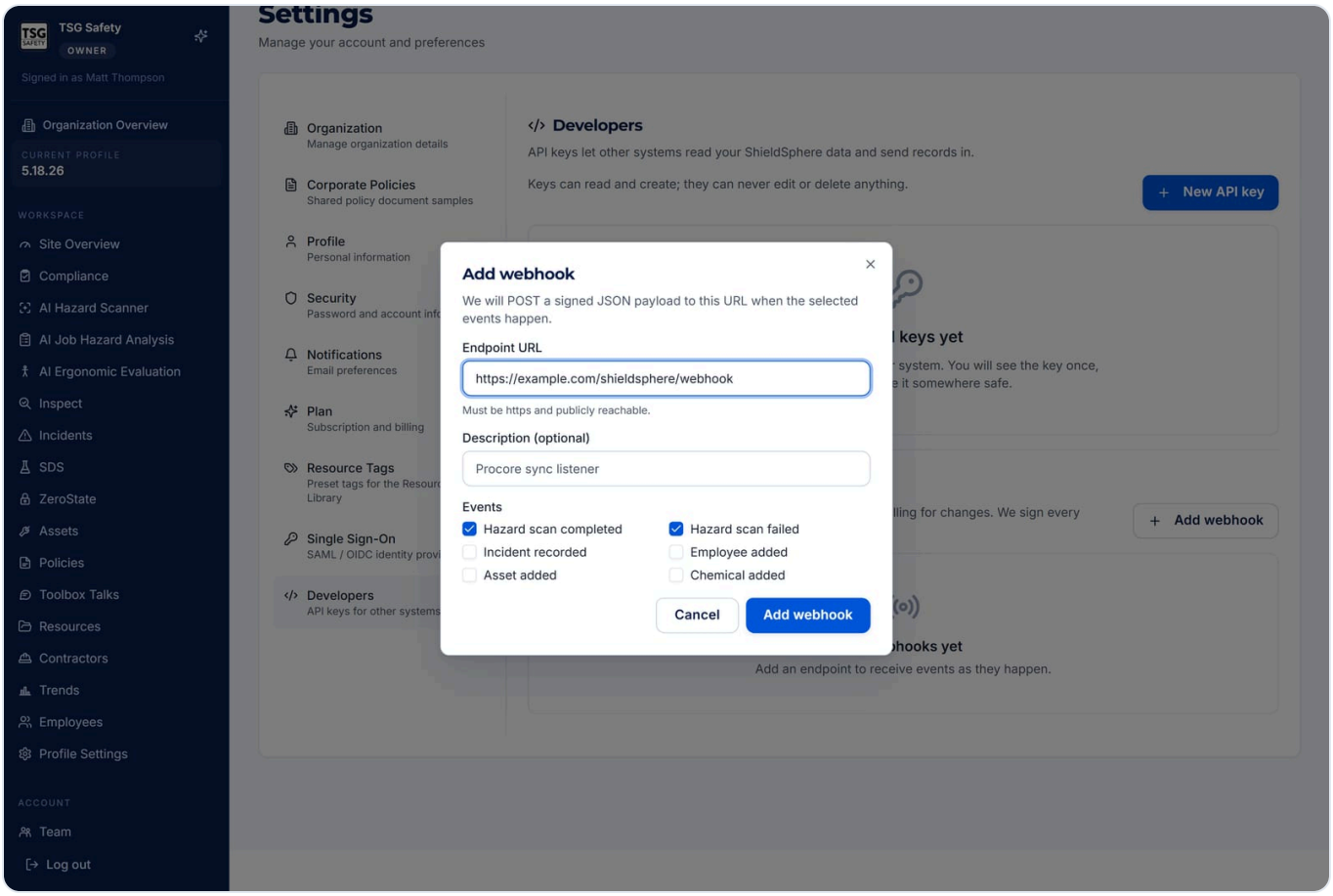
The webhooks panel. It sits directly under API keys, because most integrations end up using both.

1 Get a URL from whoever built the integration

They need to give you an address that accepts an HTTPS POST. It has to be reachable from the public internet - a URL inside your own network will not work, because ShieldSphere is calling in from outside.

2 Choose which events to send

Click **Add webhook**, paste the URL, and tick the events that system cares about. Send only what it will act on; every event you add is another request it has to handle.



Six events to choose from. Here the endpoint will hear about hazard scans finishing or failing, and nothing else.

3 Pass the signing secret to your developer

When you save, a signing secret appears once - the same rule as an API key. Their code uses it to confirm each incoming request genuinely came from ShieldSphere. Without that check, anyone who learns the URL could send fake events.

A FAILING ENDPOINT GETS PAUSED

If deliveries keep failing, ShieldSphere retries with growing gaps and eventually pauses the endpoint, so one broken URL cannot hold up everything else. The panel shows why it paused and offers **Resume** once it is fixed. Resuming keeps the same secret - no need to reconfigure anything.

USE THE DELIVERY LOG FIRST

Every endpoint has a **Deliveries** view listing recent attempts with the response your server returned. When someone reports a missing event, look there before anything else - it usually shows either the event never matched, or their server returned an error.

8 Revoking and rotating keys ADMIN

Turning a key off takes effect on the very next request. Do it without hesitating.

Revoke a key whenever it may have been exposed: a developer leaves, a laptop goes missing, a secret gets pasted into a chat or a support ticket. Revoking is instant and free. Leaving a questionable key alive is the expensive choice.

1 Revoke it

In the key list, click the revoke icon on that row and confirm. Any system using it stops working immediately.

2 Issue a replacement and update the other system

Create a new key with the same permissions and location scope, then paste it into the integration's configuration. There is no way to un-revoke, and no way to recover the old value.

REVOKING BREAKS THE INTEGRATION ON PURPOSE

The system holding that key stops working the moment you confirm. If it is doing something you rely on, have the replacement ready before you revoke - or accept a short gap.

TURNING THE API OFF ENTIRELY

Disabling the Integration API for your organization kills every key at once, immediately. It is the fastest way to shut off all outside access if you need to.

Revoked keys stay in the record rather than disappearing, so the history of what was issued and used survives. That is the same reasoning behind archiving rather than deleting documents in the Resource Library.

9 Troubleshooting

What the symptom usually means, and what to do about it.

SYMPTOM	CAUSE AND FIX
No Developers section in Settings	Either the Integration API is not enabled for your organization, or you are signed in as an administrator rather than the owner. Only the owner can issue keys. Contact ShieldSphere to have it enabled.
The other system reports "Invalid or expired API key"	One of four things: the key was mistyped, it was revoked, it passed its expiry date, or the Integration API was switched off for your organization. All four return the same message on purpose, so an attacker cannot learn which. Check the key list first - if the key is not there, it was revoked.
"This API key does not have the ... scope"	The key is valid but was not given that permission. Issue a new key with the right permissions ticked; permissions cannot be added to an existing key.
A location's records come back empty	The key is probably scoped to a different location. Check the Locations column in the key list. A scoped key sees exactly one site.
Two records were created instead of one	The other system retried a write without an idempotency key. Add one - see section 5. On an incident this also consumes an OSHA case number, so tell whoever maintains your 300 log.
Photo submission is refused	The photo URL must be HTTPS, publicly reachable, under 20MB, and must return the image directly. A link that redirects elsewhere is rejected, because a redirect can point somewhere the original link did not. Pre-signed storage URLs often redirect - resolve them first.
Hazard analysis never finishes	Check the job's status. "Dead" means it failed permanently and the reason is included - usually an unreadable photo or a location that could not be resolved. Resubmit after fixing the cause.

A webhook endpoint shows as paused	Deliveries failed repeatedly and it paused automatically. The panel names the last failure. Fix the endpoint, then click **Resume** - the secret does not change.
Webhooks are not arriving at all	Open the endpoint's **Deliveries** view. No entries means no matching event occurred, so check which events are ticked. Entries with error responses mean the events were sent and your server rejected them.
Requests start returning "Rate limit exceeded"	The key exceeded its per-minute allowance. Reads and writes are counted separately. The response says how long to wait; a well-behaved integration backs off and retries.

> **WHEN YOU CONTACT SUPPORT**
>
> Every API response carries a request id. Include it and we can find the exact request in our logs rather than guessing from a description.

Screens captured from the live application in August 2026 using a demonstration site. Your screens will show your own data. Because ShieldSphere ships changes regularly, check the version above against the current release before circulating this guide widely.