SOAR-EDR HOME LAB

🛡️ SOAR–EDR Automated Incident Response Playbook

This project demonstrates a real-world **Security Operations Center (SOC)** workflow that integrates an **Endpoint Detection & Response (EDR)** platform with a **Security Orchestration, Automation, and Response (SOAR)** solution to detect threats and automatically isolate compromised machines with analyst approval.

The lab simulates an attack, detects it at the endpoint level, triggers automated alerts, requests human approval, and performs controlled containment — just like a modern SOC environment.

🚀 Project Objective

The objective of this project is to design and implement an automated incident response workflow that:

- Detects malicious activity on an endpoint
- Sends detection alerts to a SOAR platform
- Notifies security analysts via Slack and Email
- Allows an analyst to decide whether the machine should be isolated
- Automatically isolates the endpoint if approved
- Verifies and reports the isolation status

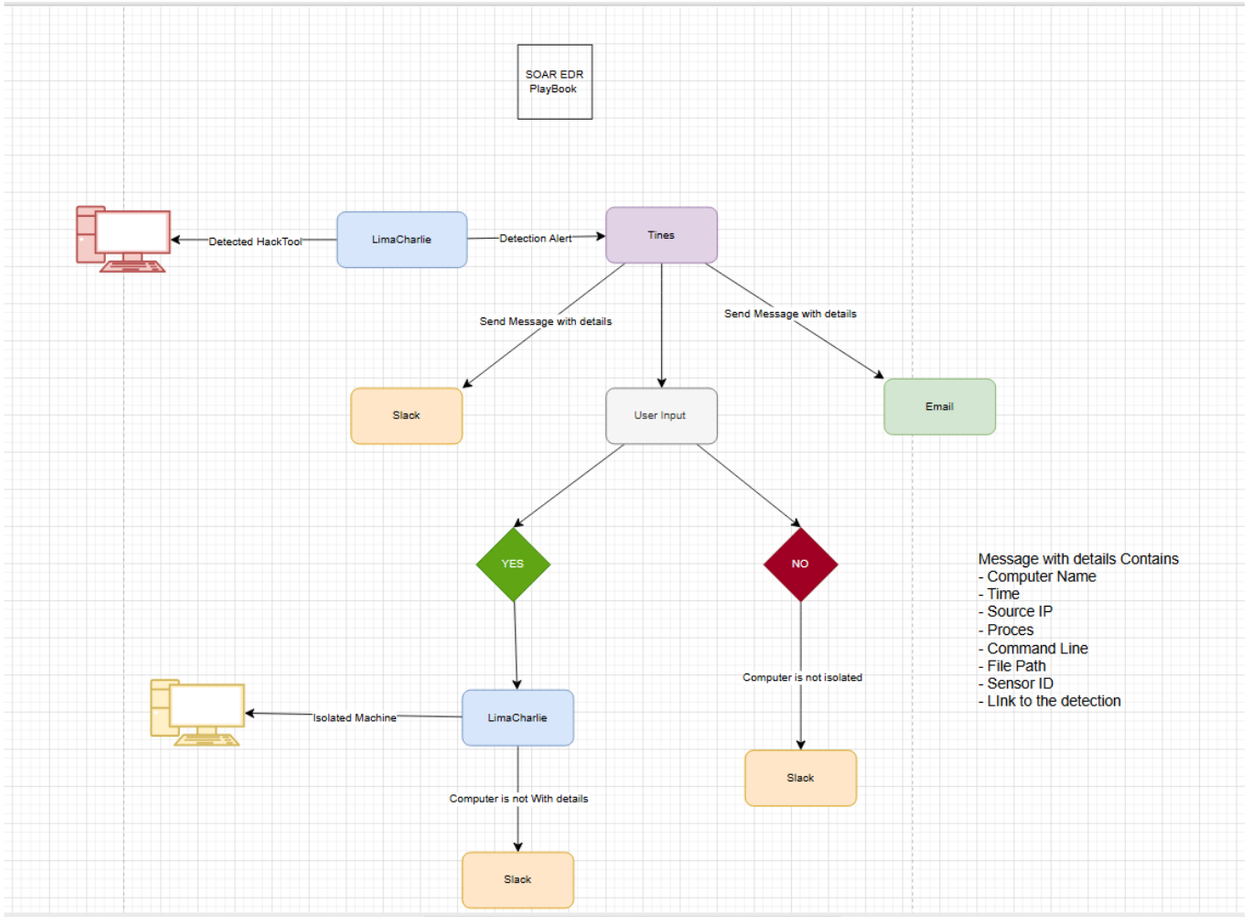
This project reflects how security teams combine automation with human decision-making to reduce response time while avoiding accidental disruptions.

🧰 Technologies Used

TOOL	ROLE IN THIS PROJECT
LimaCharlie (EDR)	Endpoint monitoring, detection, and response actions
Tines (SOAR)	Workflow automation and playbook orchestration
Slack	Real-time SOC alert notifications
Email	Secondary alerting channel
LaZagne	Simulated credential dumping attack tool
Windows 10 (Virtual Machine)	Target endpoint for attack simulation
VirtualBox	Virtual lab environment

🖥️ Lab Architecture Overview

The lab consists of a Windows 10 virtual endpoint monitored by LimaCharlie. When suspicious activity is detected, LimaCharlie forwards the event data to Tines through a webhook. Tines processes the event, sends alerts, requests analyst input, and performs automated containment if approved. The final containment status is then reported back to the SOC team.

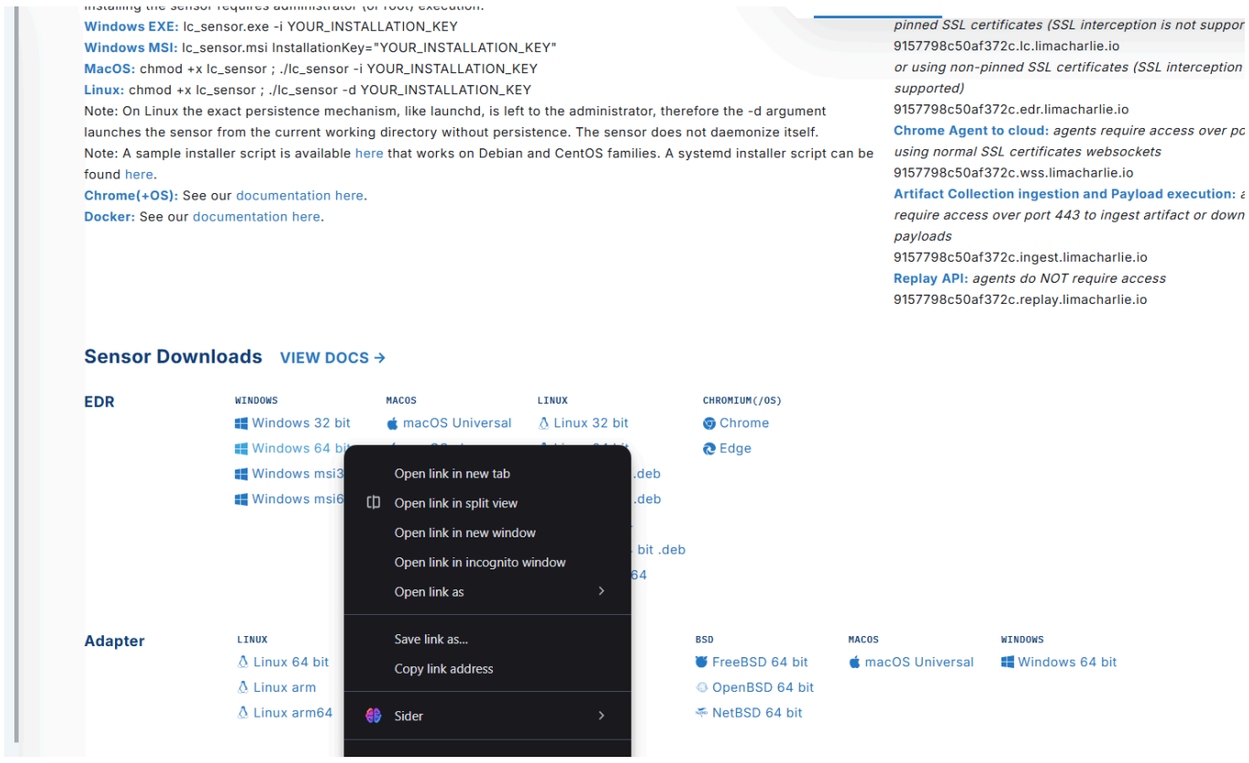


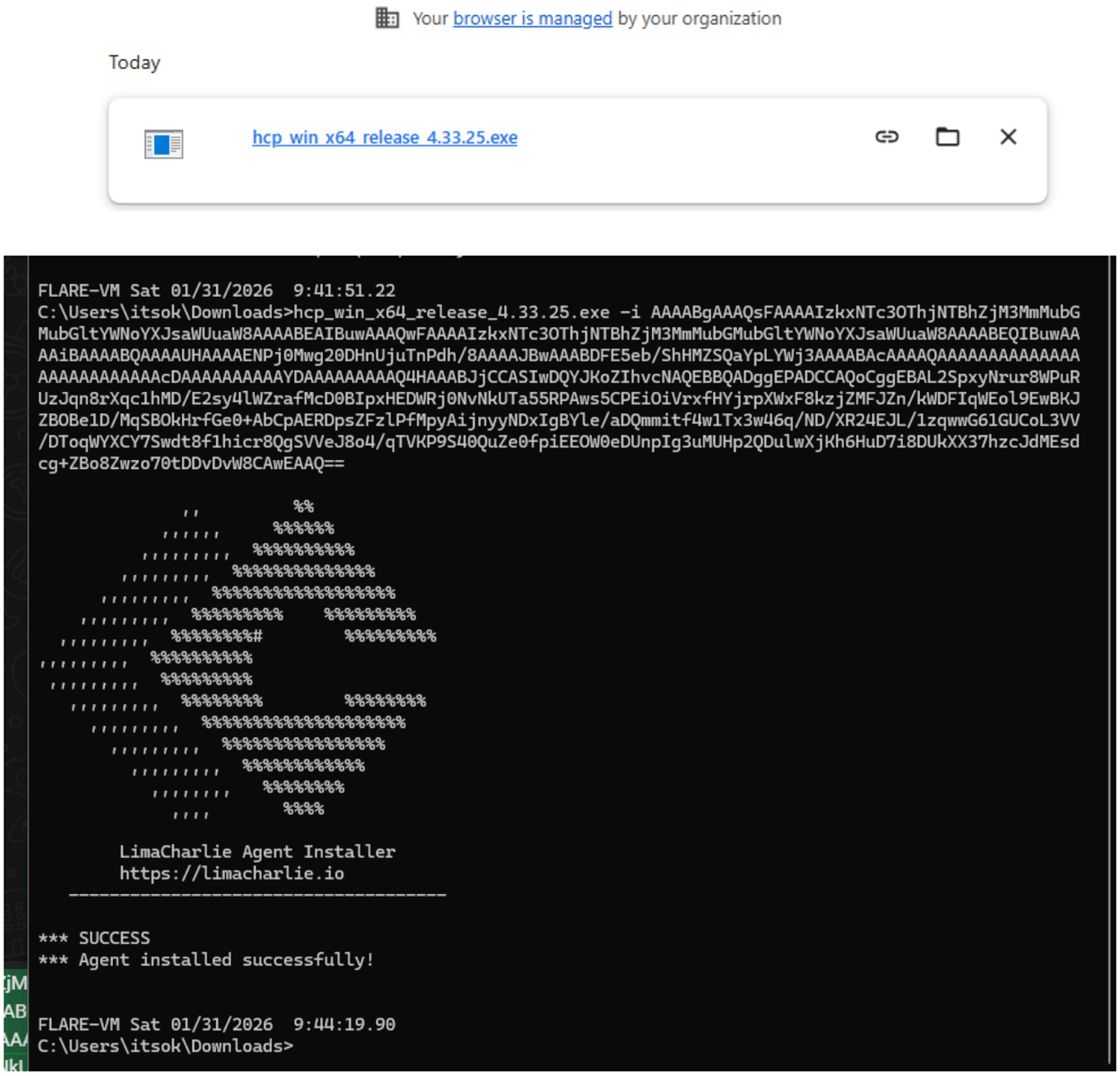
This architecture demonstrates the full lifecycle of **Detection → Alerting → Human Decision → Automated Response → Verification**.

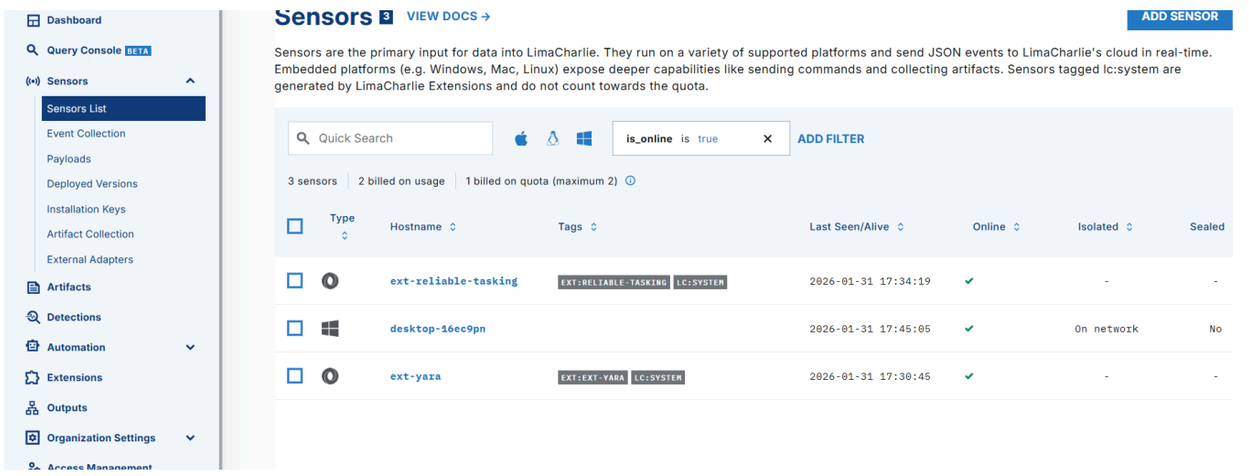
⚙️ Step-by-Step Implementation

1️⃣ Endpoint & EDR Deployment

A Windows 10 virtual machine was deployed in VirtualBox to serve as the monitored endpoint. In LimaCharlie, an installation key was generated, and the sensor installation package was downloaded using the generated link. The sensor was installed on the Windows VM using this key.



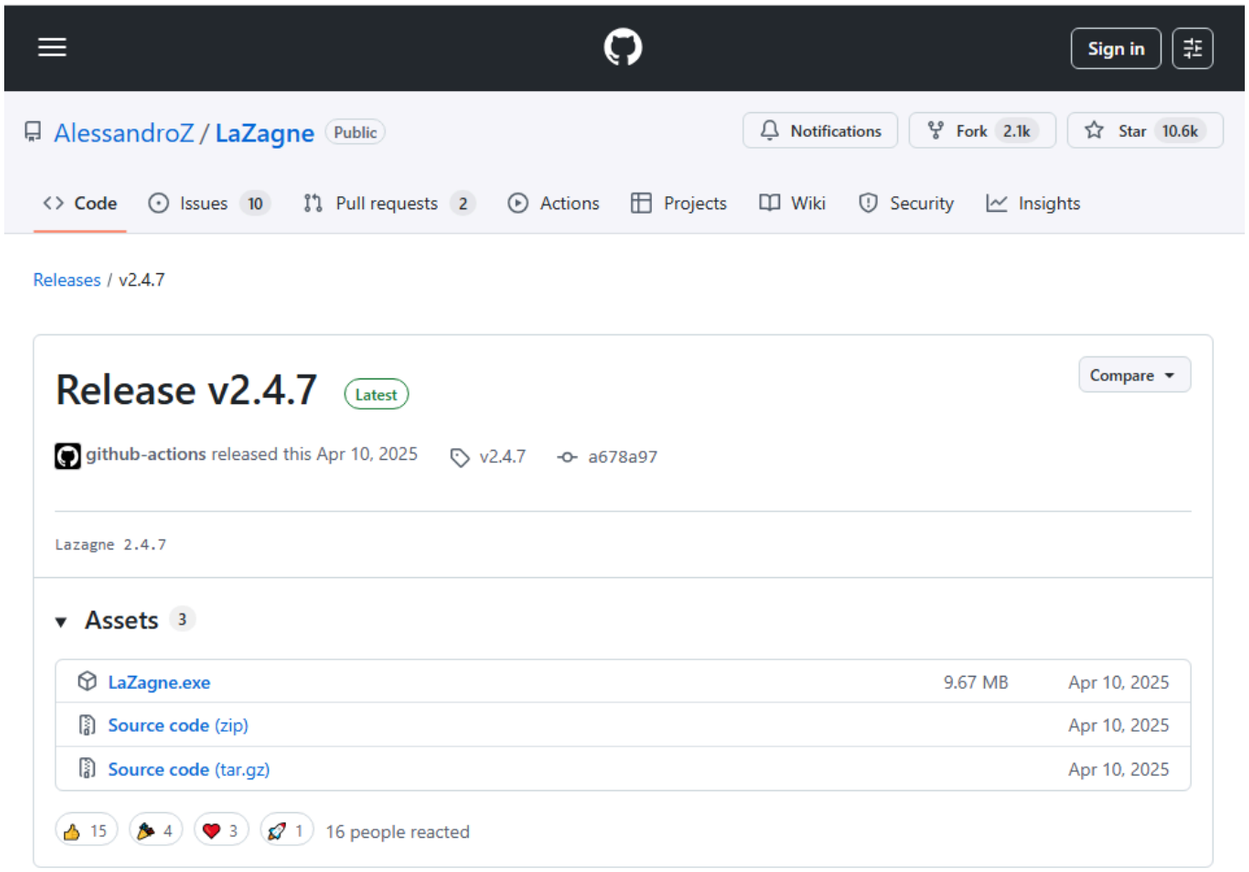


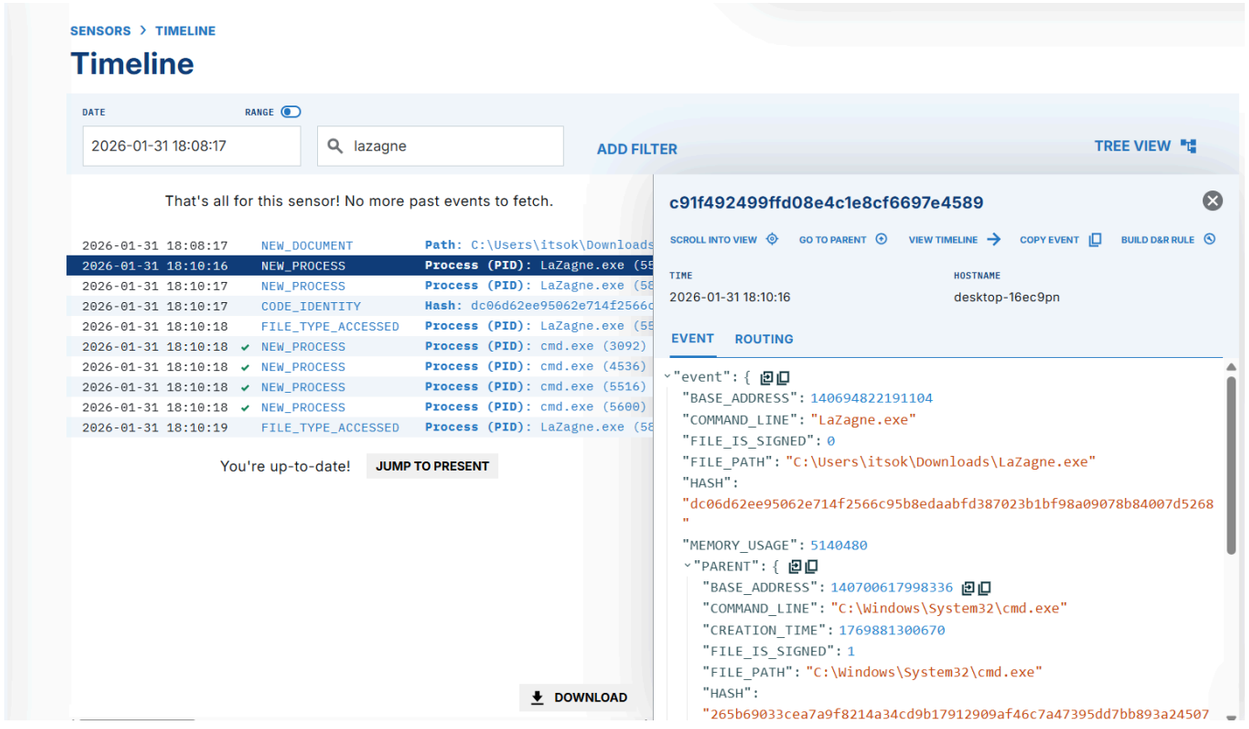


After installation, the endpoint appeared in the LimaCharlie Sensors list, confirming that the EDR agent was successfully communicating with the platform and collecting telemetry.

2️⃣ Simulating Malicious Activity

To generate realistic security telemetry, the credential recovery tool **LaZagne** was executed on the Windows endpoint. LaZagne attempts to extract stored credentials, which makes it useful for simulating credential dumping behavior seen in real attacks.

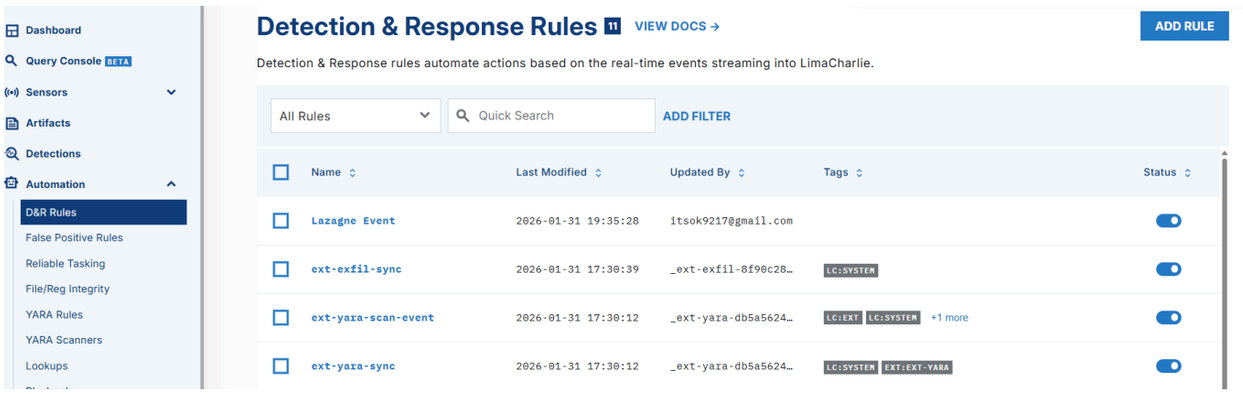




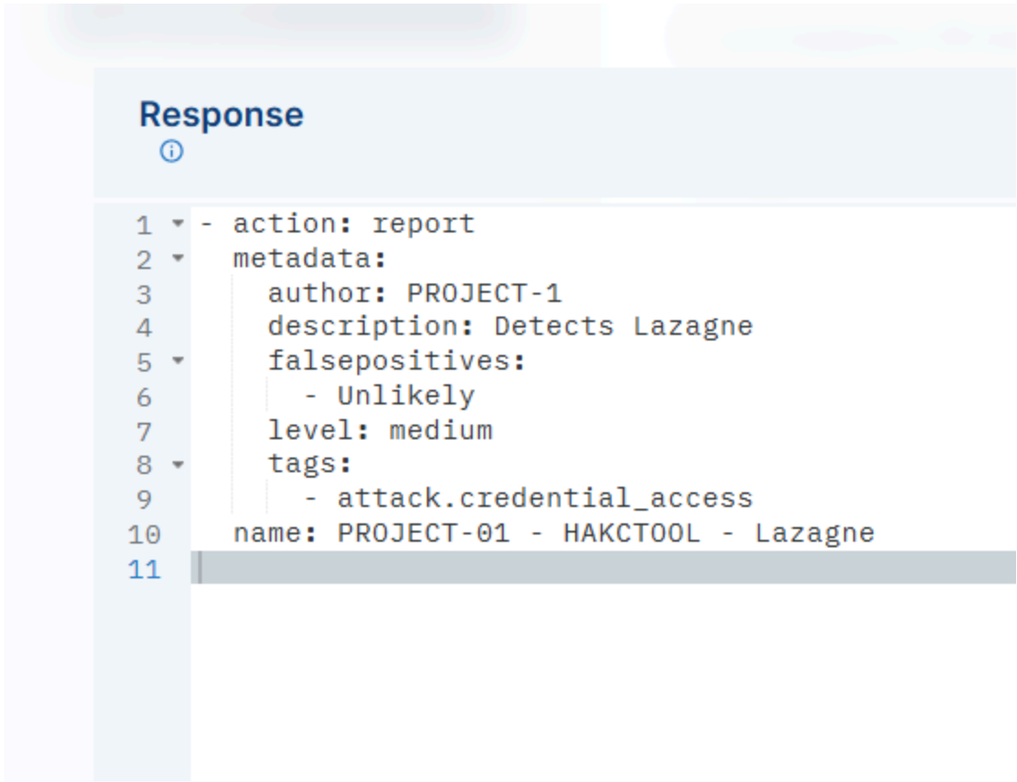
Executing LaZagne produced process creation and command-line telemetry in LimaCharlie. This data was later used to build a detection rule.

3 Detection Engineering in LimaCharlie

A Detection & Response (D&R) rule was created in LimaCharlie to detect execution of `lazagne.exe`. Real telemetry from the endpoint timeline was used to test the detection logic to ensure accuracy and reduce false positives.



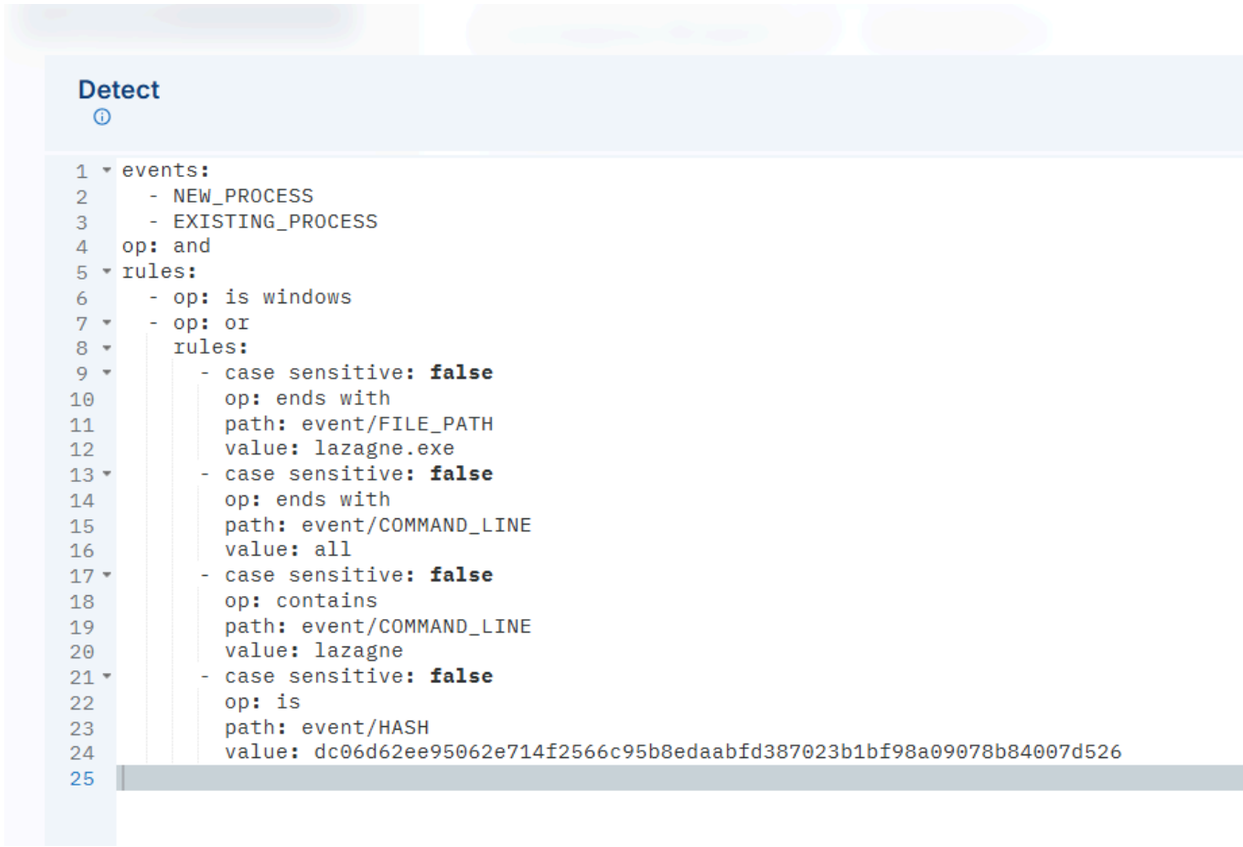
- Created the New rule in D&R rules section (Lazagne Event)



Response

```
- action: report
  metadata:
    author: PROJECT-1
    description: Detects Lazagne
    falsepositives:
      - Unlikely
    level: medium
    tags:
      - attack.credential_access
  name: PROJECT-01 - HAKCTOOL - Lazagne
```

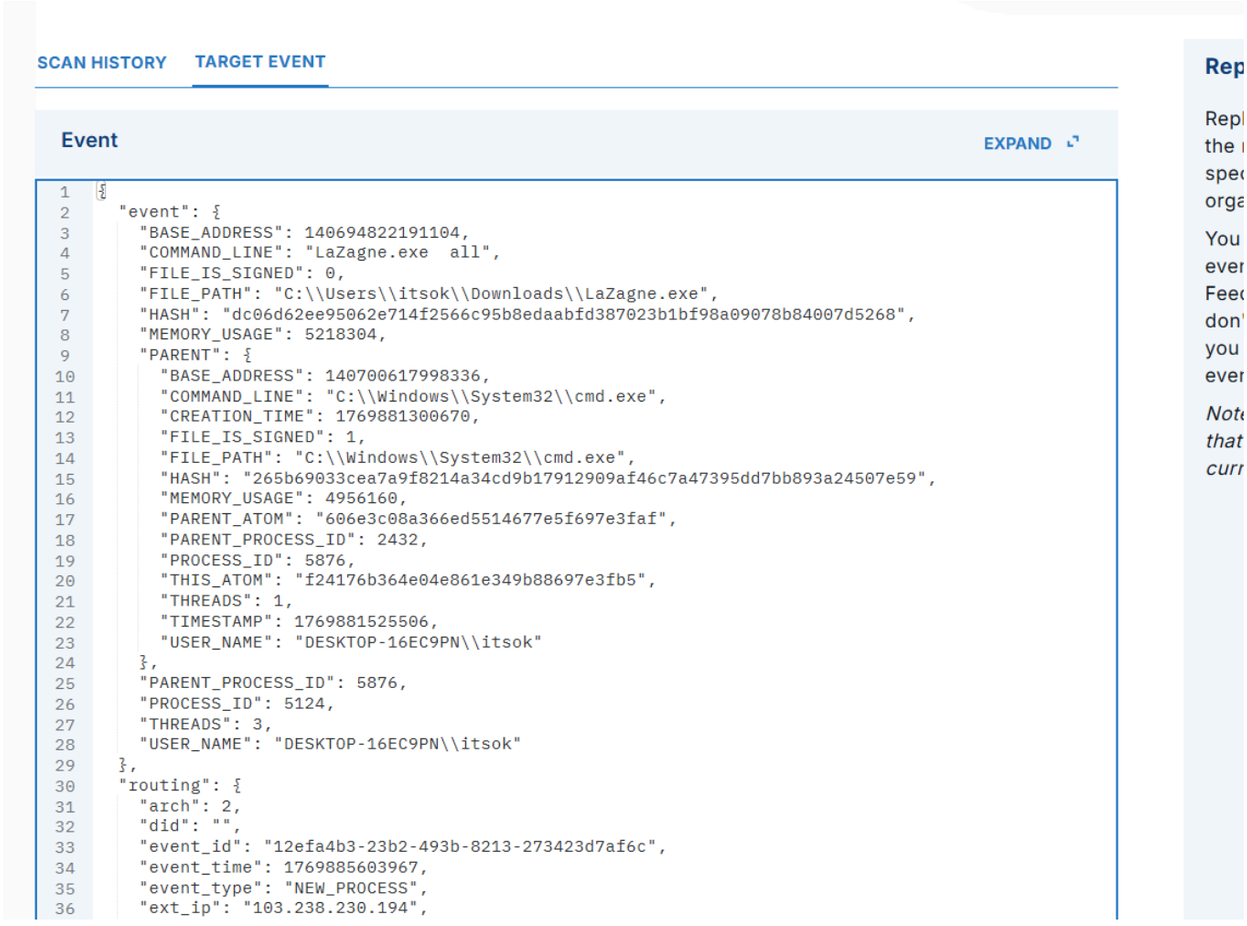
- This is the Response Rule for the below Detection



Detect

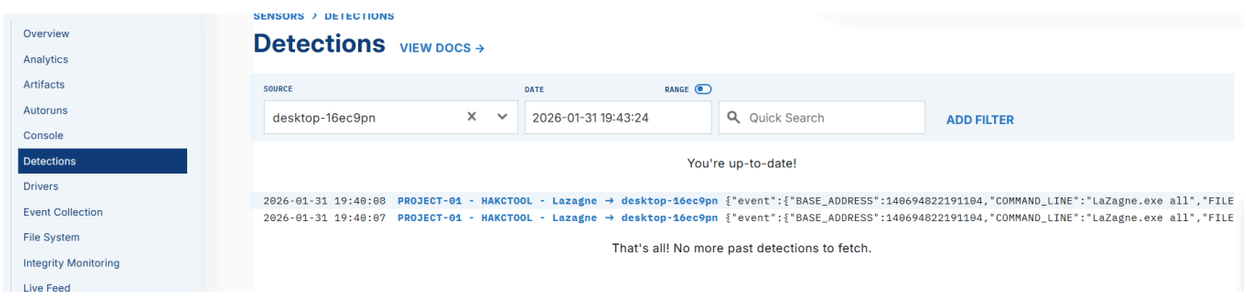
```
events:
  - NEW_PROCESS
  - EXISTING_PROCESS
op: and
rules:
  - op: is windows
  - op: or
    rules:
      - case sensitive: false
        op: ends with
        path: event/FILE_PATH
        value: lazagne.exe
      - case sensitive: false
        op: ends with
        path: event/COMMAND_LINE
        value: all
      - case sensitive: false
        op: contains
        path: event/COMMAND_LINE
        value: lazagne
      - case sensitive: false
        op: is
        path: event/HASH
        value: dc06d62ee95062e714f2566c95b8edaabfd387023b1bf98a09078b84007d526
```

- This is the Detection Rules written according to the Lazagne.exe Event by viewing the Timelines in the LimaCharlie

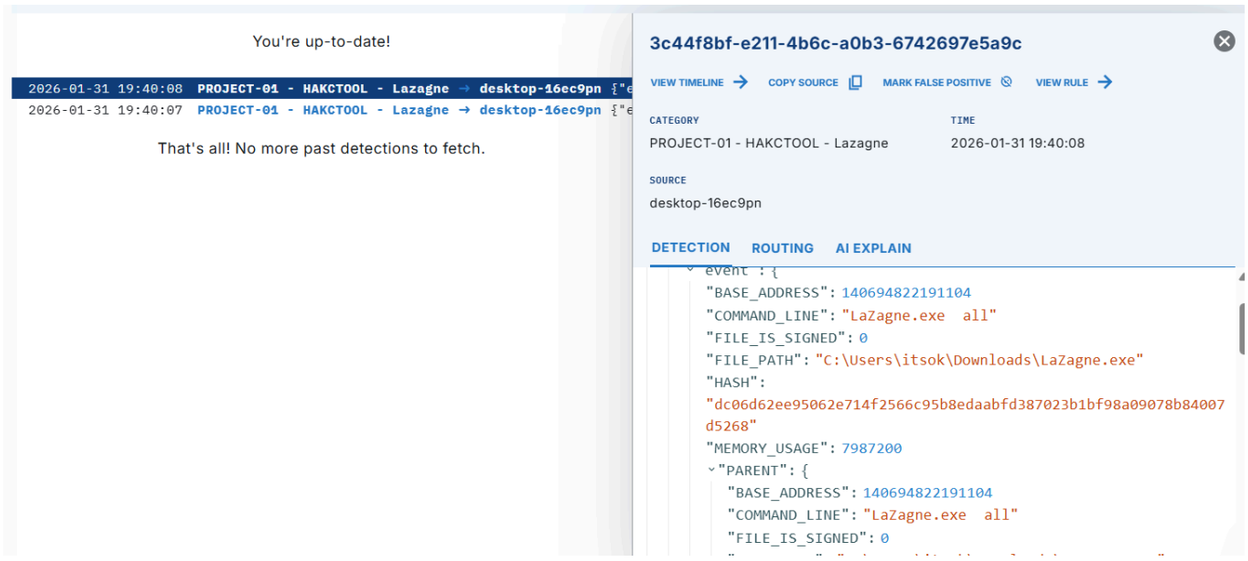


After successful testing, the rule was saved. When LaZagne was executed again, the detection triggered and appeared in the Detections section, confirming the detection rule was functioning correctly.

- Here we can see the Test results of input Event (that is the Lazagne Event from Timeline) and we got the all true



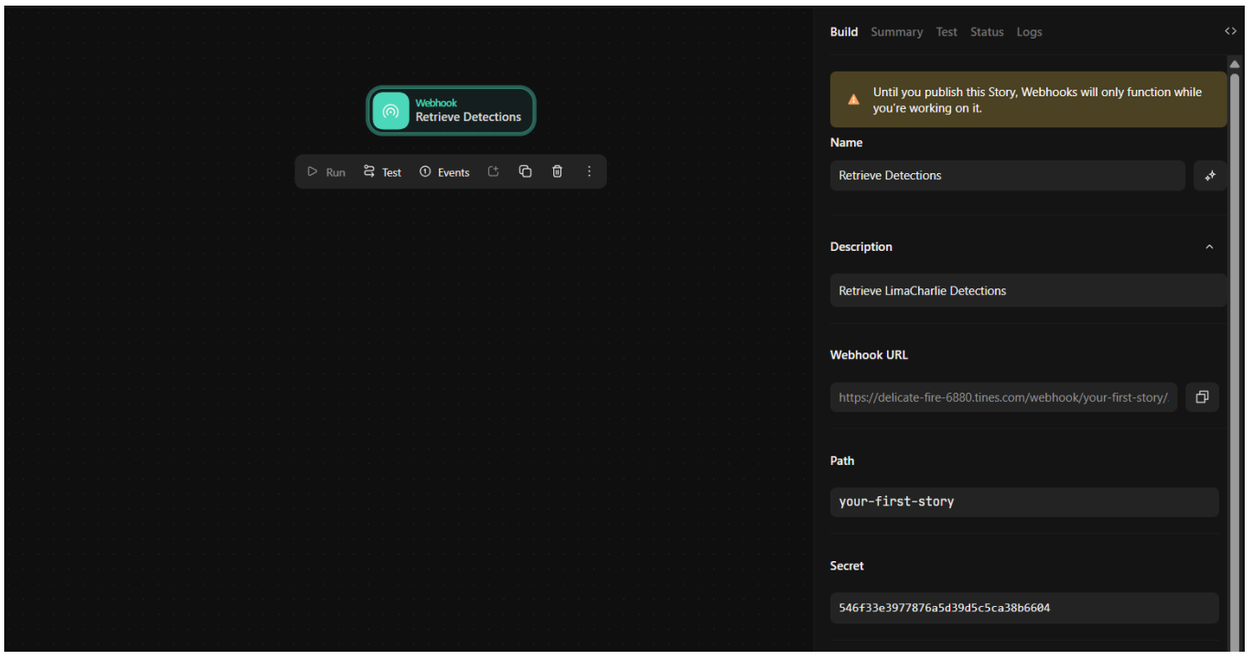
- That detections logs falls under the Detections Section in LimaCharlie

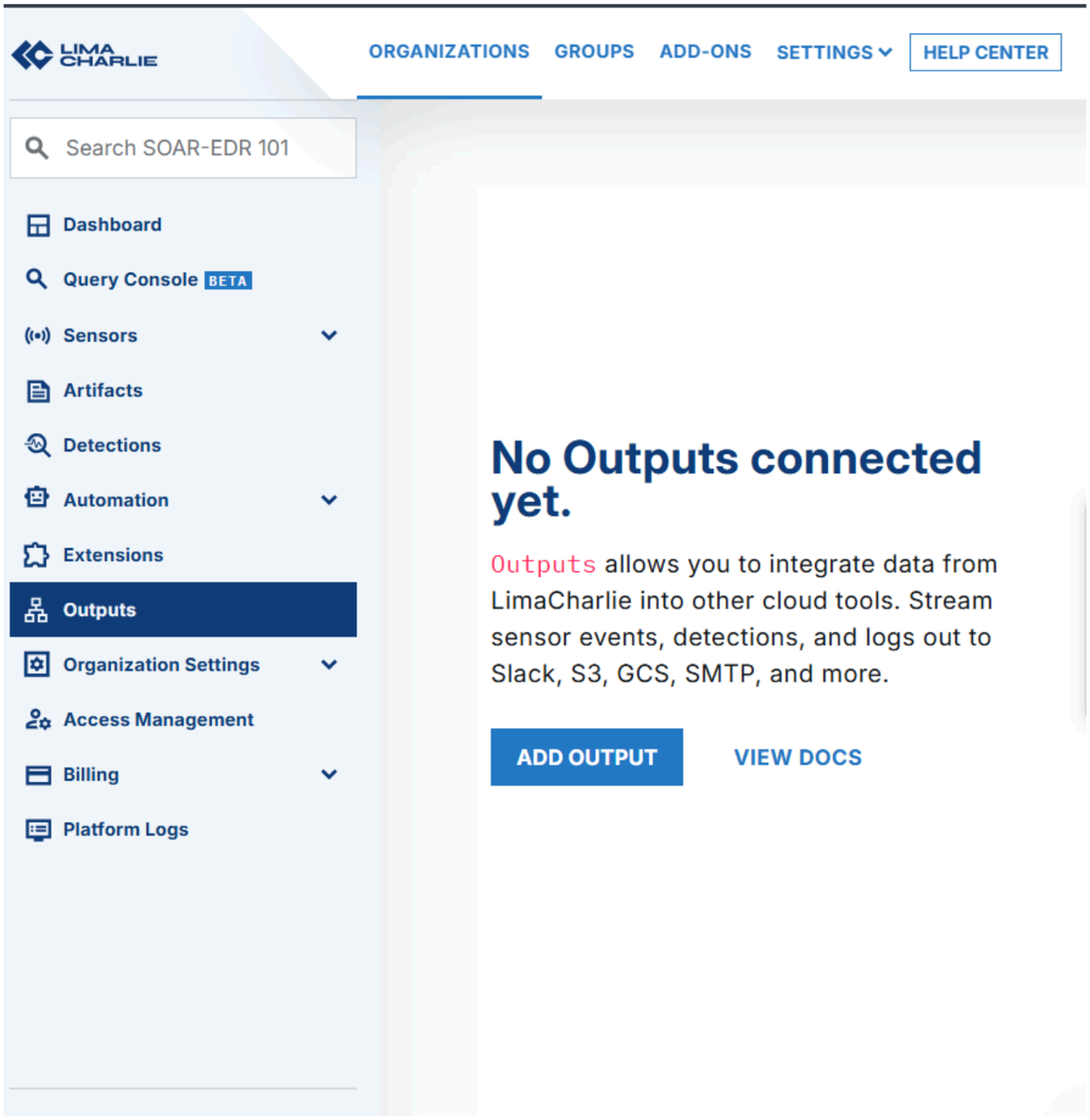


This step demonstrates practical detection engineering using real endpoint telemetry.

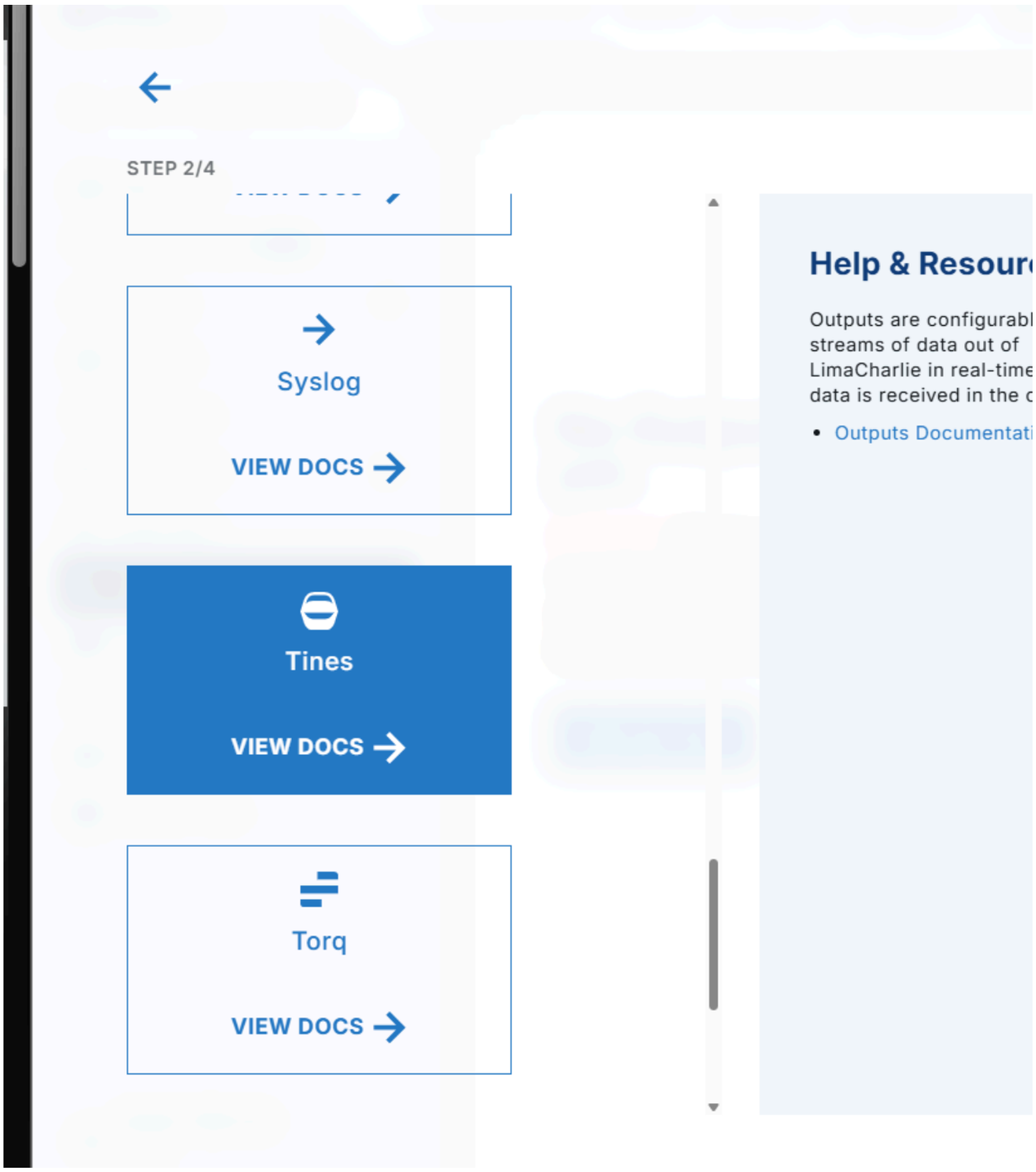
4️⃣ Sending Detections to SOAR (Tines)

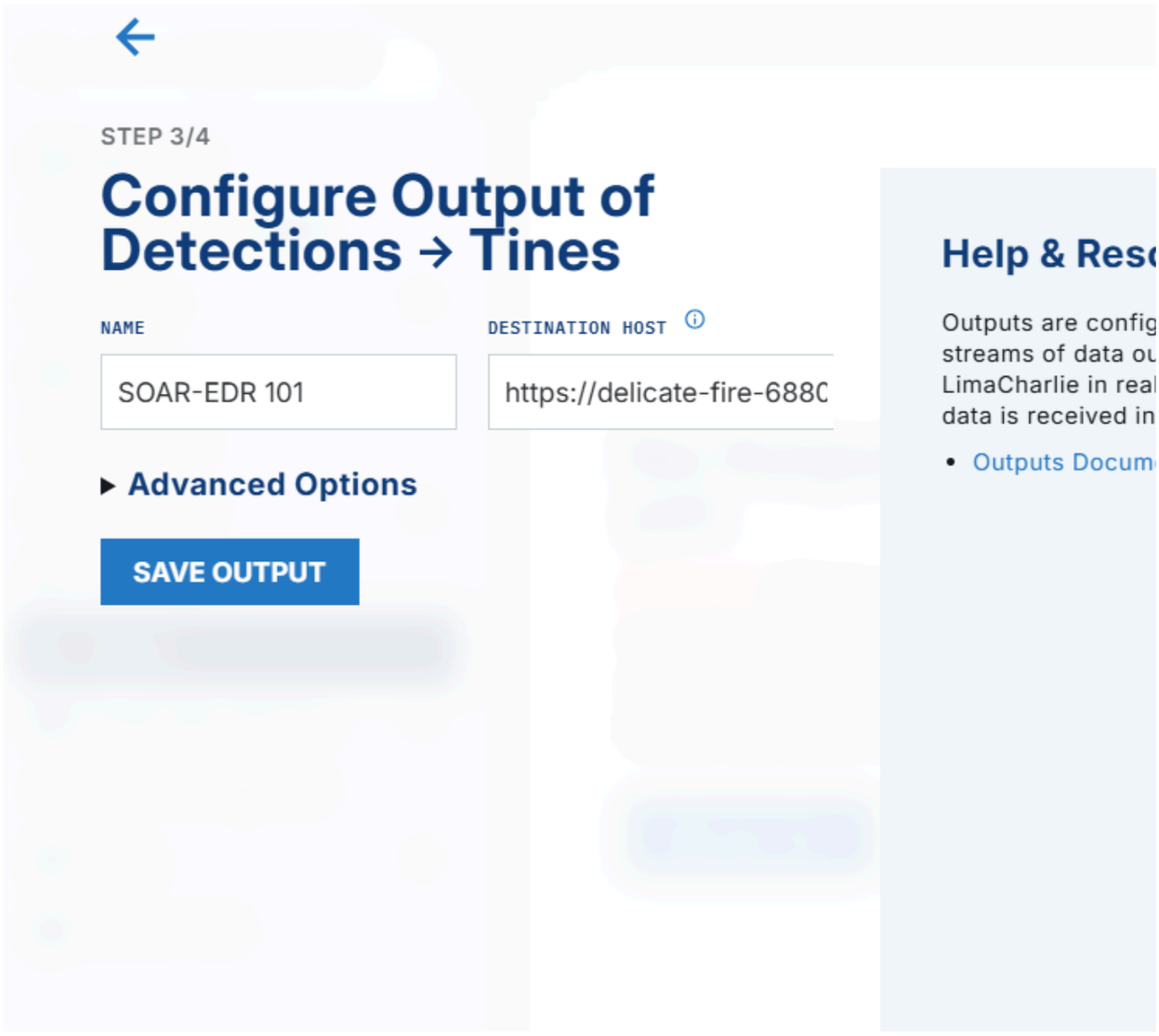
To automate incident response, LimaCharlie detections were forwarded to Tines using a webhook integration. A webhook was created in Tines, and its URL was configured as an output destination in LimaCharlie.



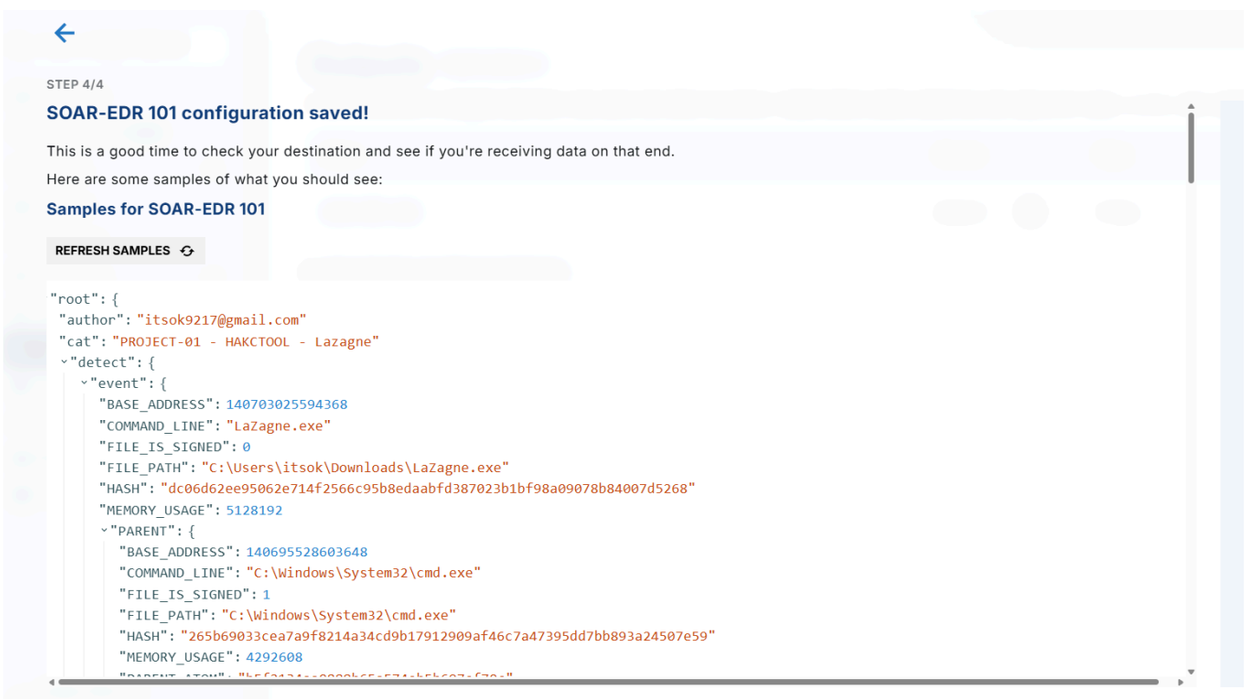


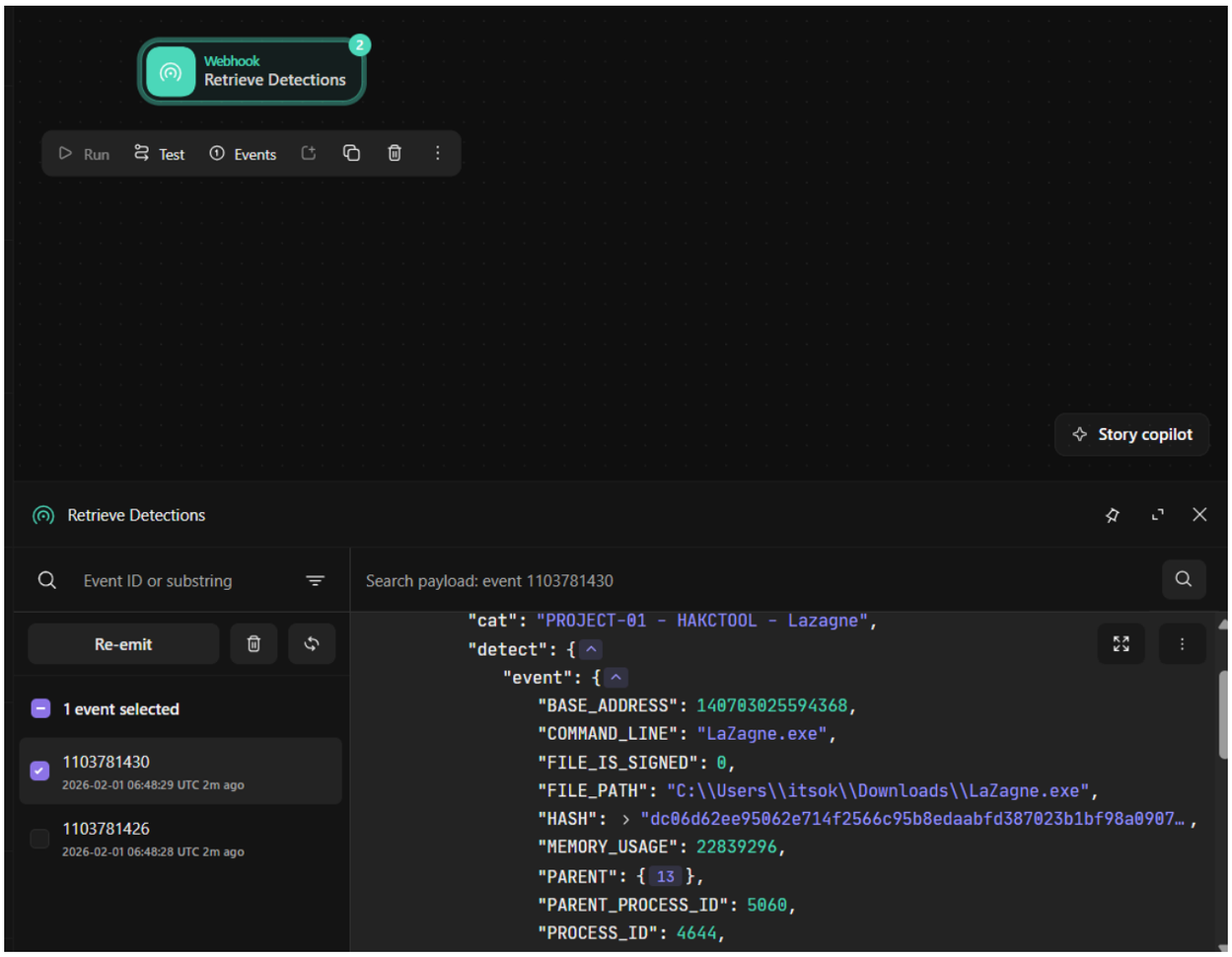
- In OUPUT Section , we need to select th application we choosen if not we can go with Webhook
  option to insert the URL to retrieve the Event.


STEP 2/4
Syslog
VIEW DOCS
Tines
VIEW DOCS
Torq
VIEW DOCS
Help & Resour
Outputs are configurabl
streams of data out of
LimaCharlie in real-time
data is received in the c
Outputs Documentati



When the detection rule triggered again, the event data was successfully received by Tines. This established a working pipeline between the EDR and SOAR platforms.



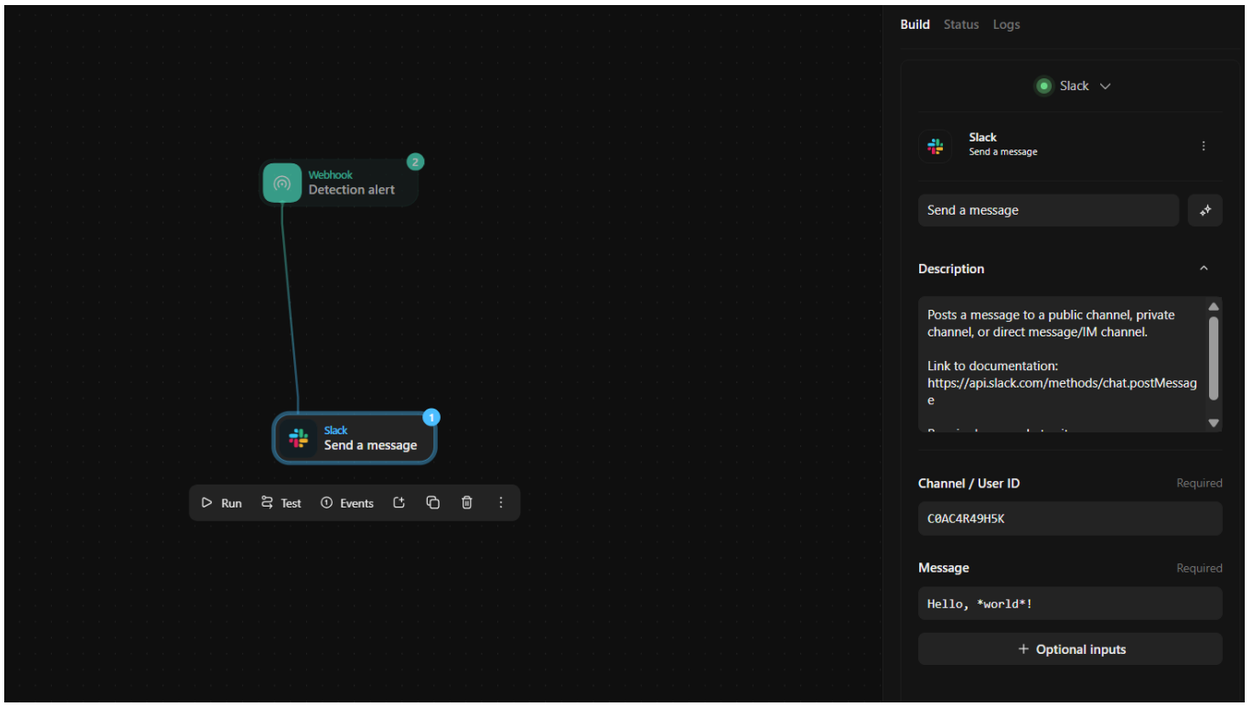


- And we see the Event retrieved in the webhook we created.

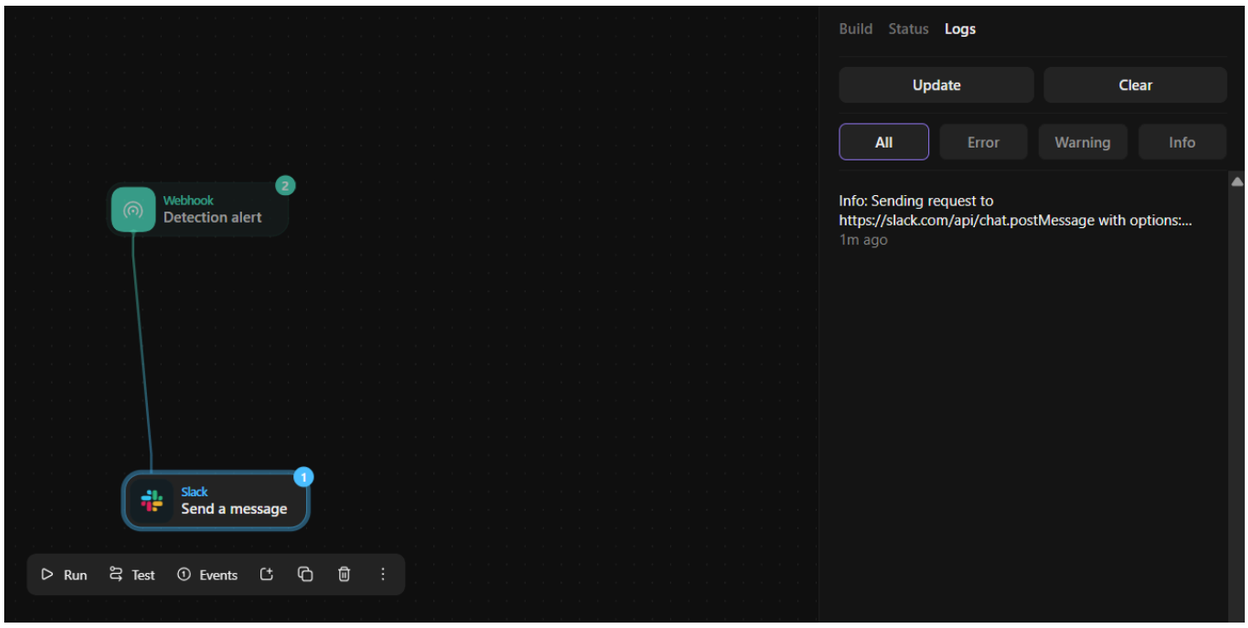
5 Alerting the SOC Team

Within Tines, automated alert actions were configured to notify analysts:

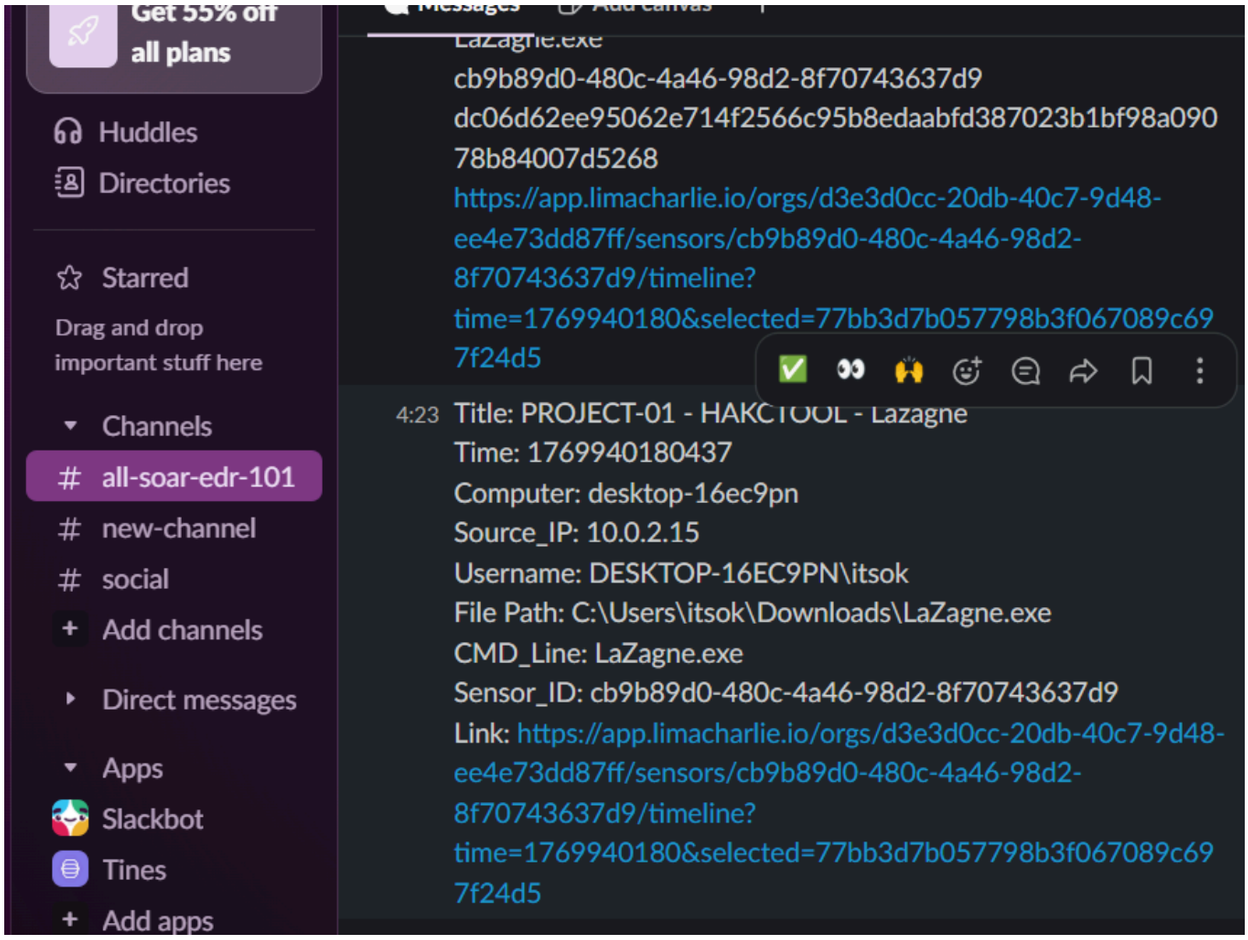
- A Slack message containing detection details
- An email notification with the same information



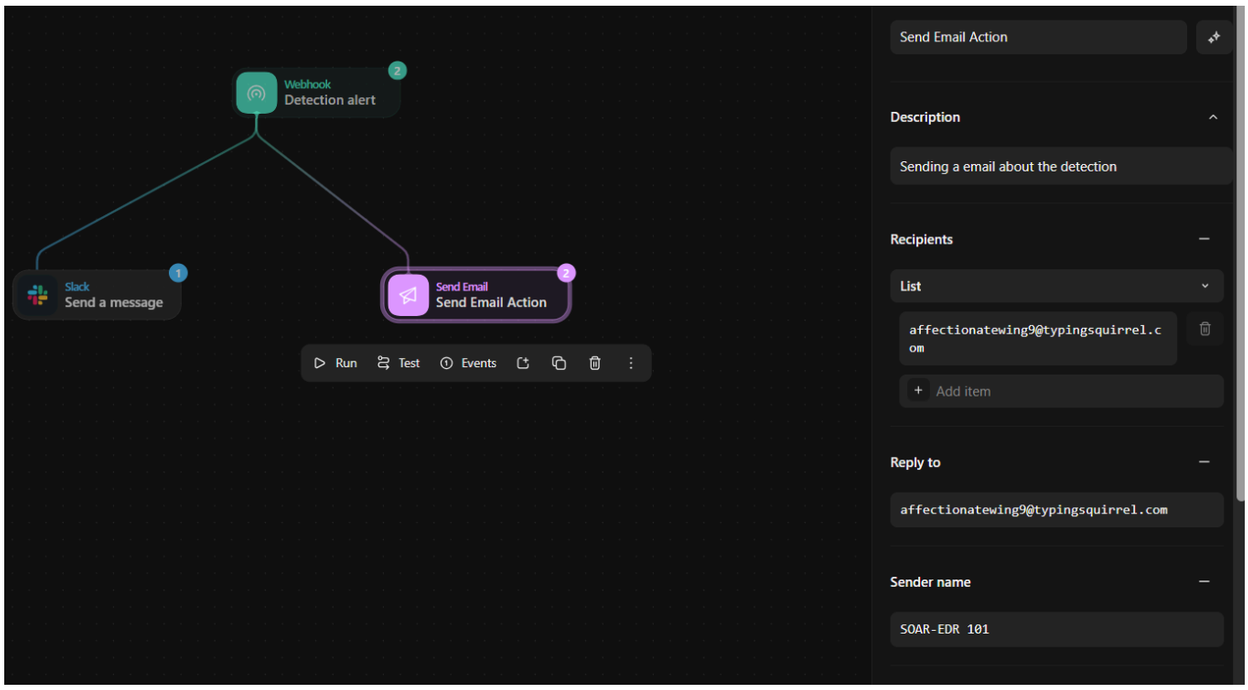
- before using the slack template in tines , we need to add the credentail of the slack in tines.



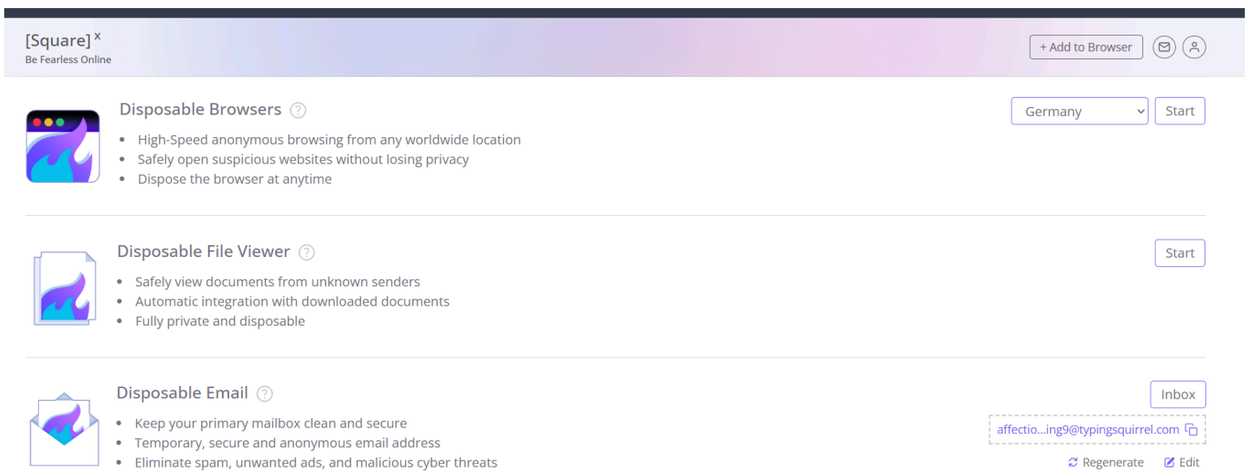
- Here we can see the Logs that , a msg has been send to that slack.

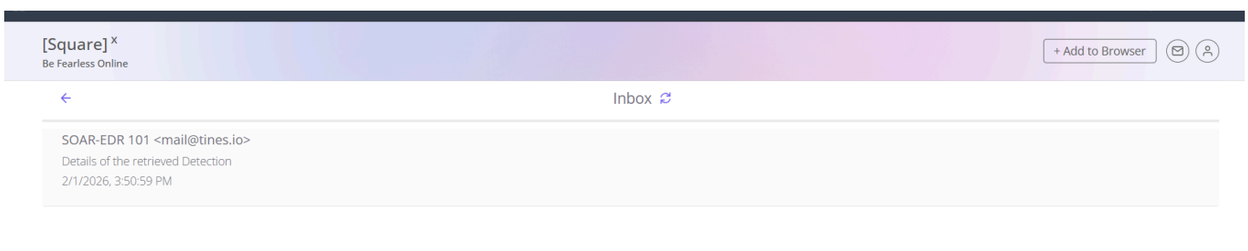


- Here is the message that came from the Tines about the Detection Retrieved. (WITH A DETAILS)



- Using the mail template , and using a temporary mail from SquareX.





- And we can see the Detailed mail about the Detection

The alert messages included key forensic information such as:

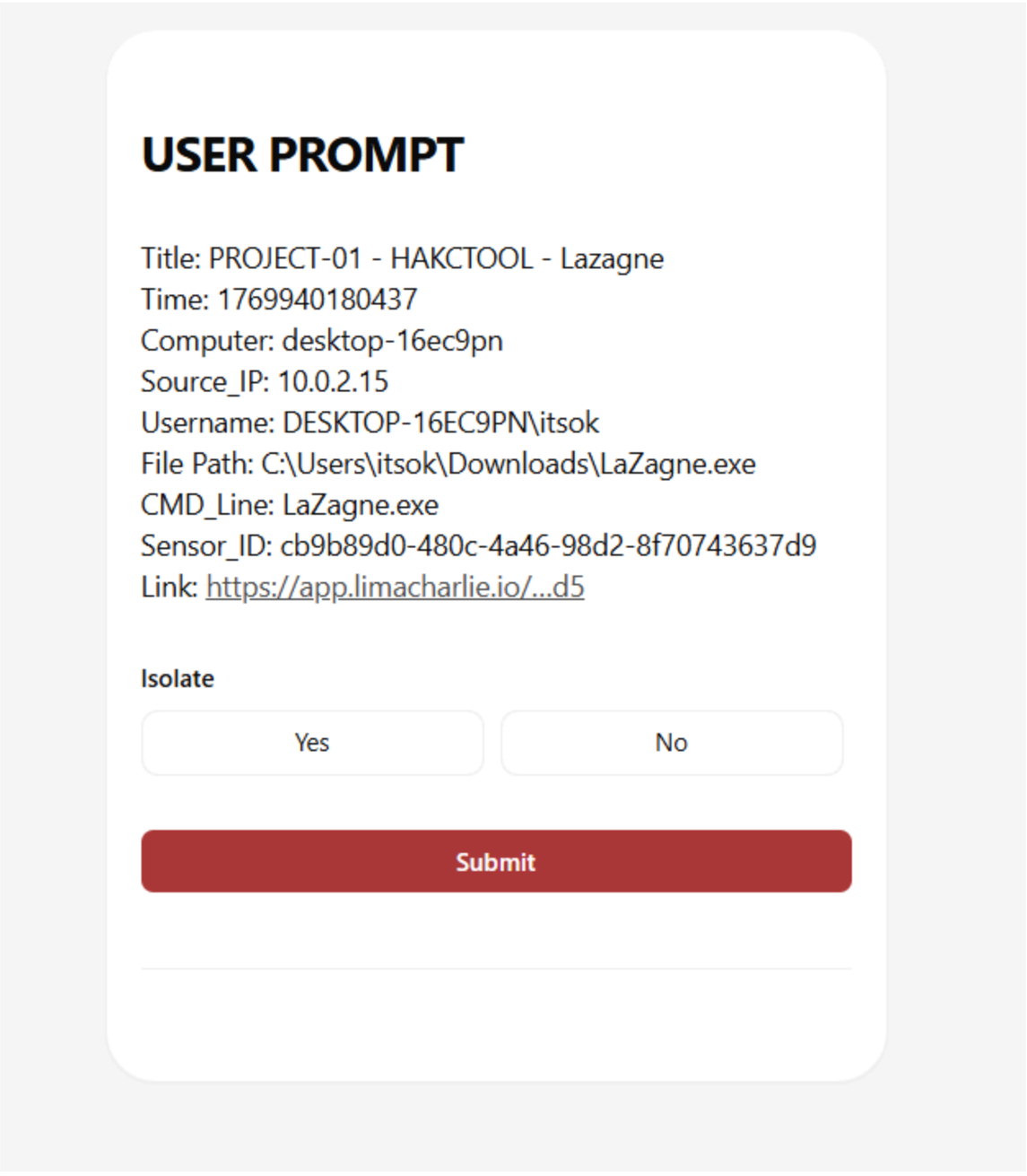
- Computer name
- Username
- Process name
- Command line arguments
- Timestamp of detection

This ensures analysts have sufficient context to evaluate the threat before taking action.

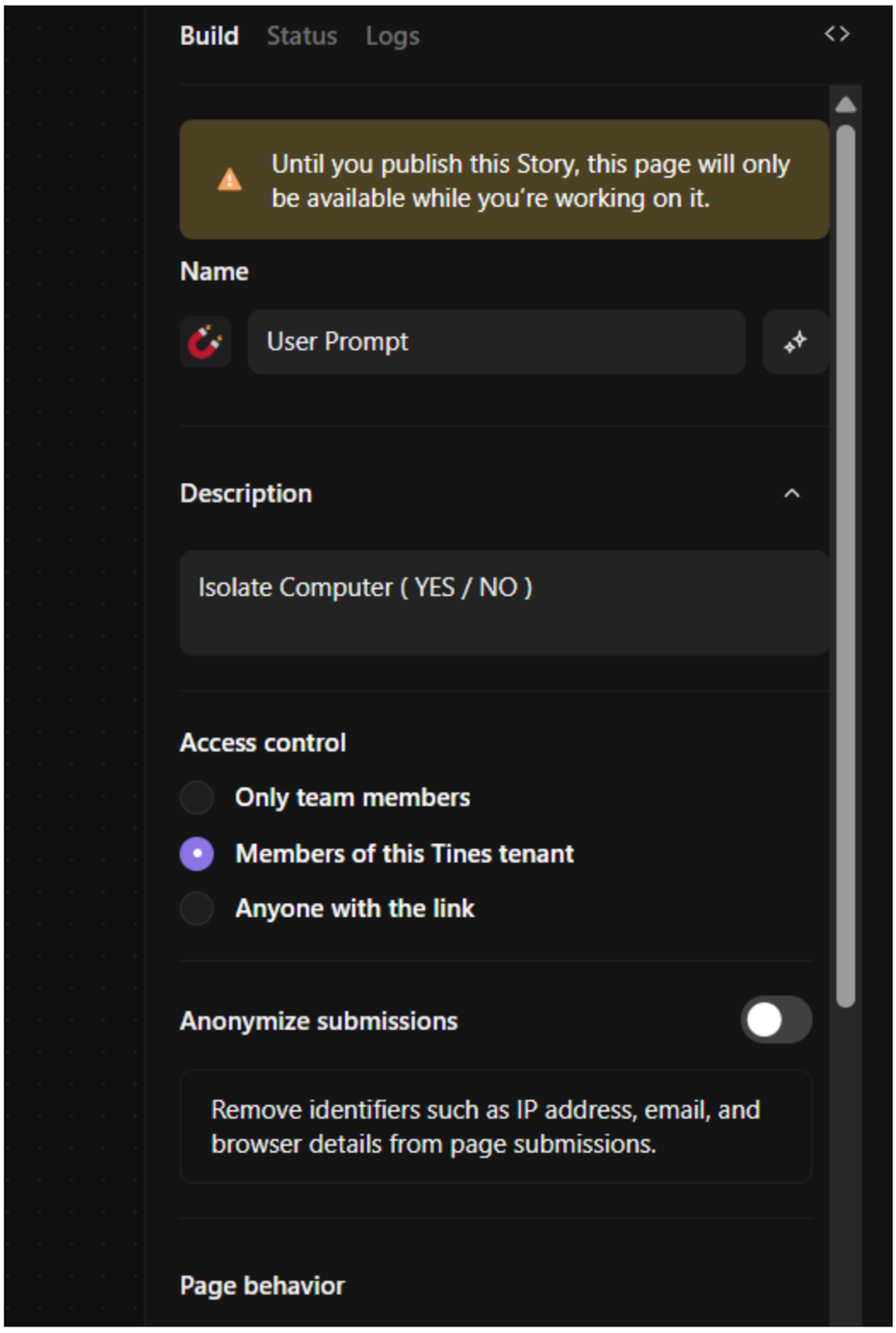
6️⃣ Human-in-the-Loop Decision Page

A Tines Page was created to allow an analyst to make a containment decision. The page presented a simple question:

“Do you want to isolate this computer? (YES / NO)”



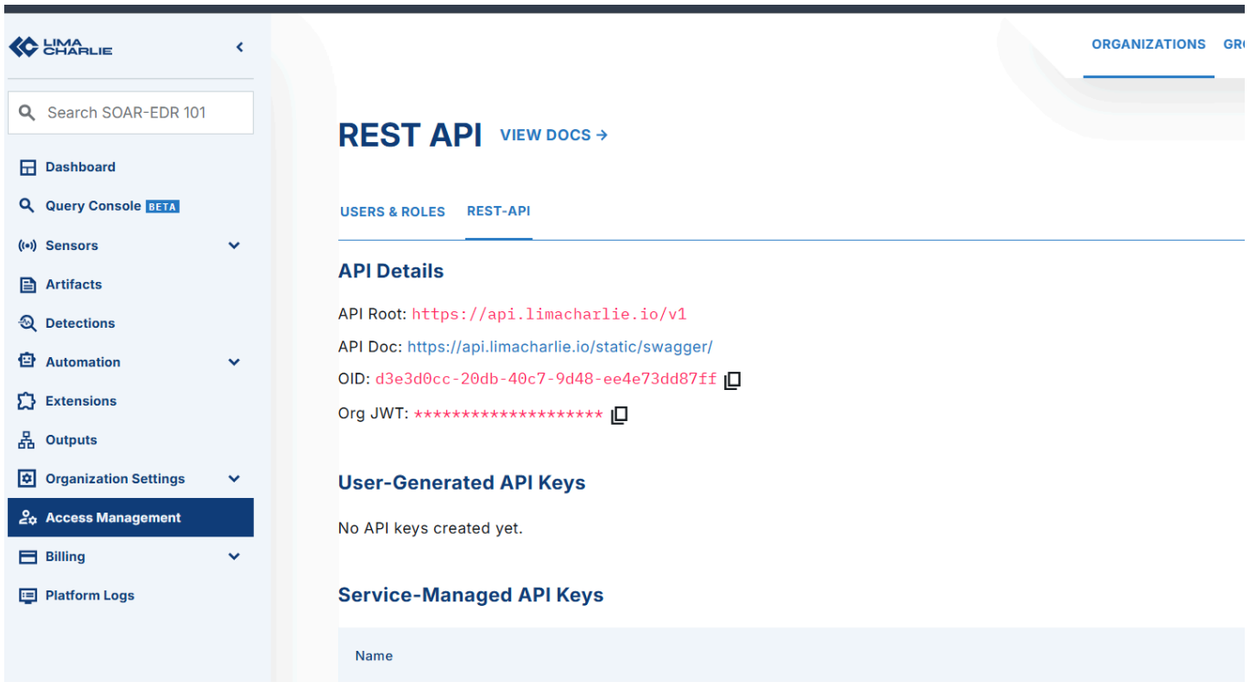
- here are included the info about the detection happen in the computer with main details to do further investigation.



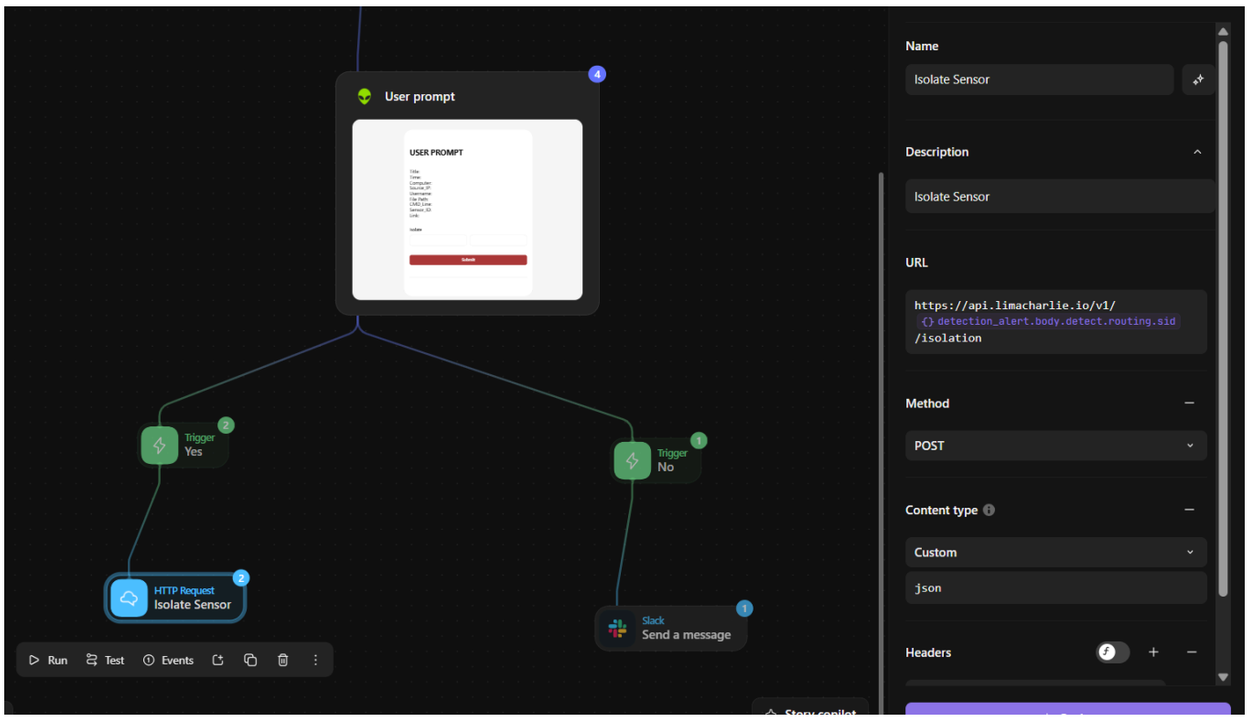
This step introduces a human approval checkpoint before performing disruptive response actions like network isolation. This mirrors real SOC procedures where containment must often be approved by an analyst.

7️⃣ Automated Endpoint Isolation (If YES)

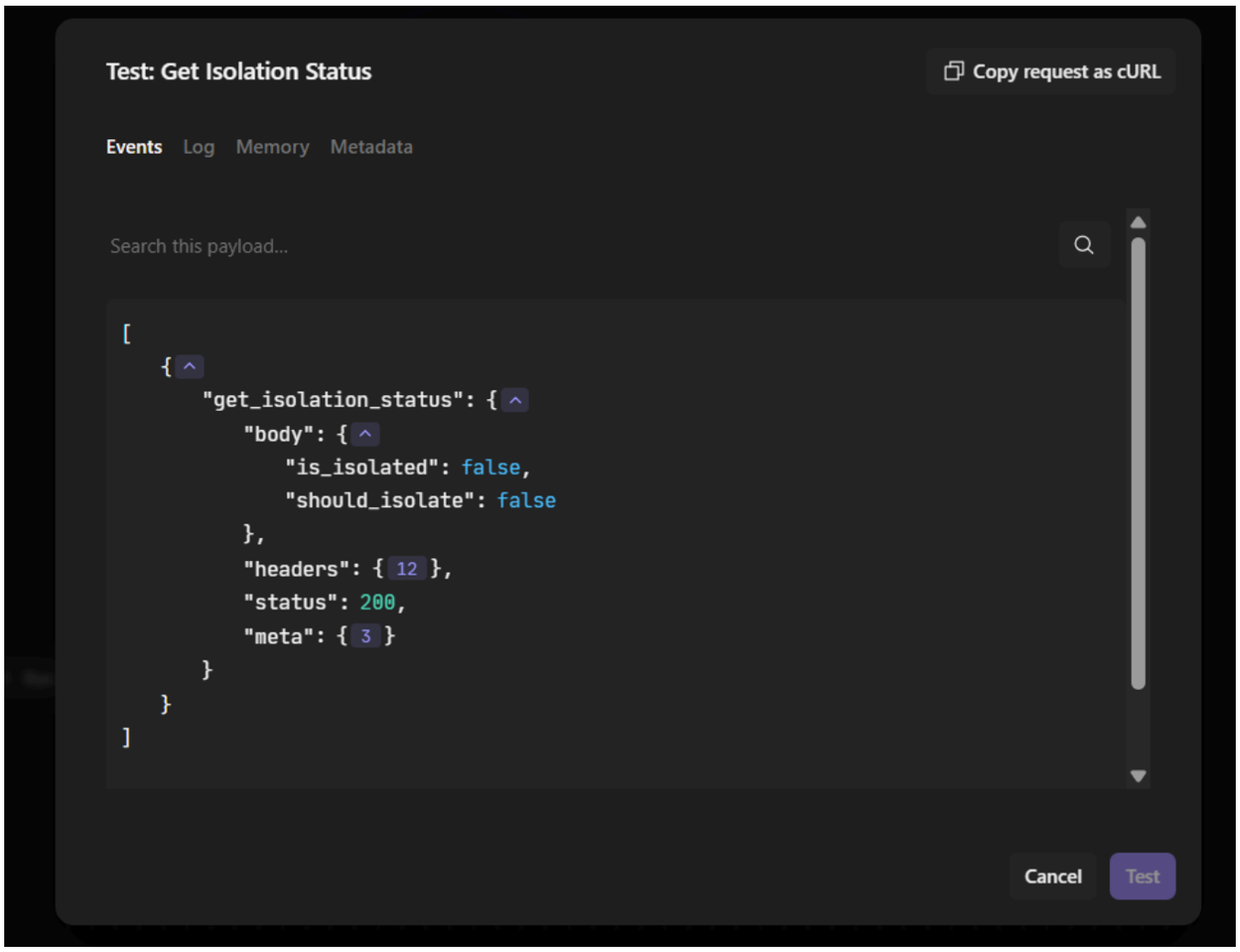
If the analyst selected **YES**, Tines triggered an API request to LimaCharlie to isolate the endpoint. This placed the Windows machine into network isolation mode, preventing it from communicating with other systems.



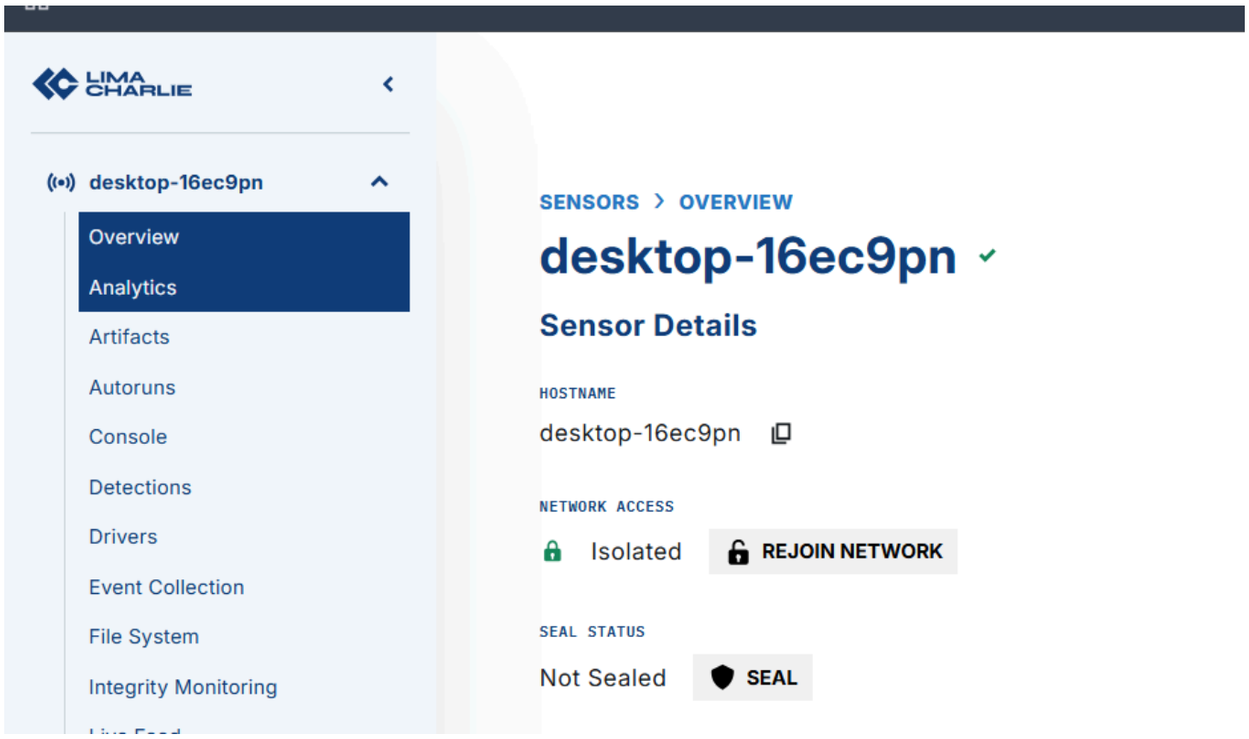
- here we need to use the API key to use the LIMACHARLIE template in tines to isolate the network access of the windows machine , so this API will be insert at the build page of the template

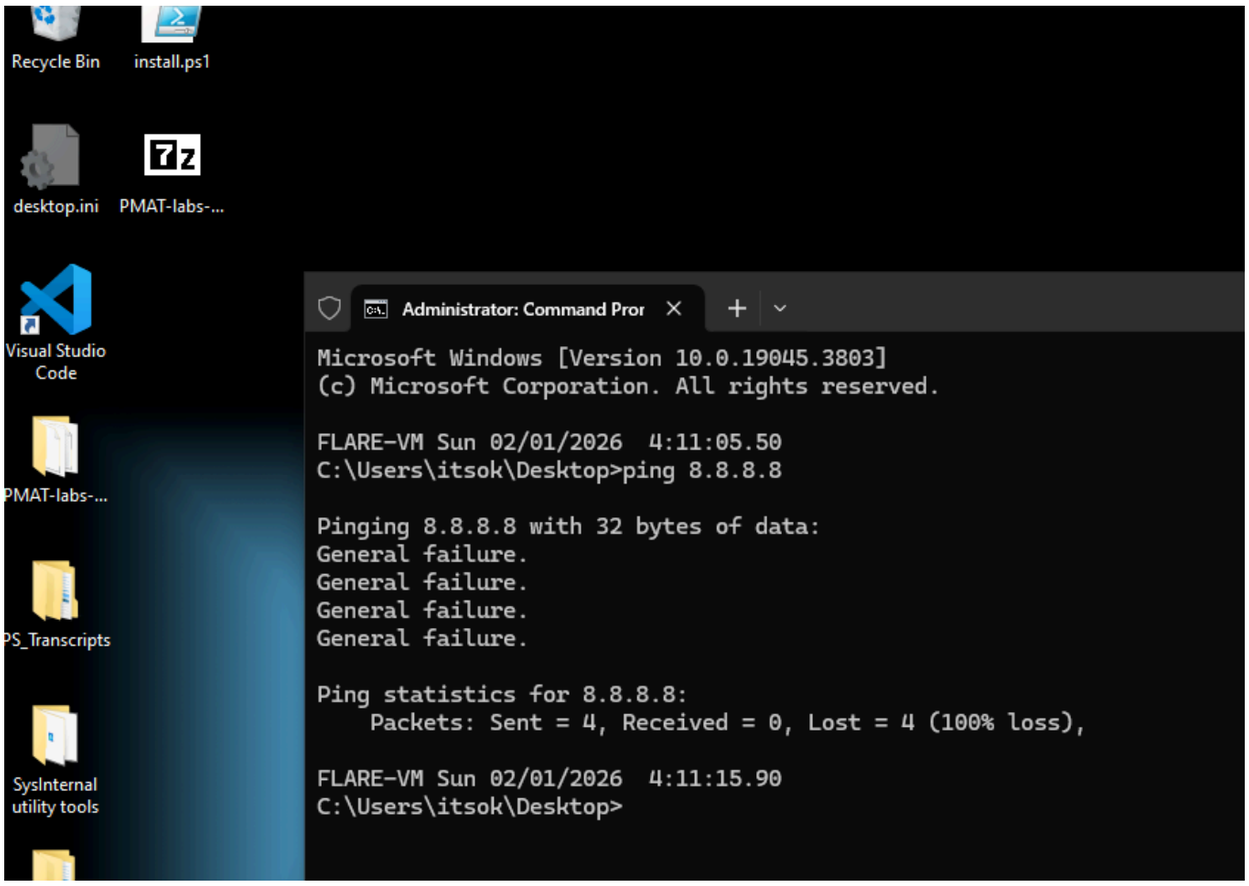


- Using the Isolate Sensor of Limacharlie to isolate the mahcine , Here we are isolating using the (SID) that is Sensor ID to identify the machine.



The isolation status was verified in LimaCharlie, where the sensor showed that network isolation was active. A final Slack message was sent to inform the SOC team that the endpoint had been successfully isolated.

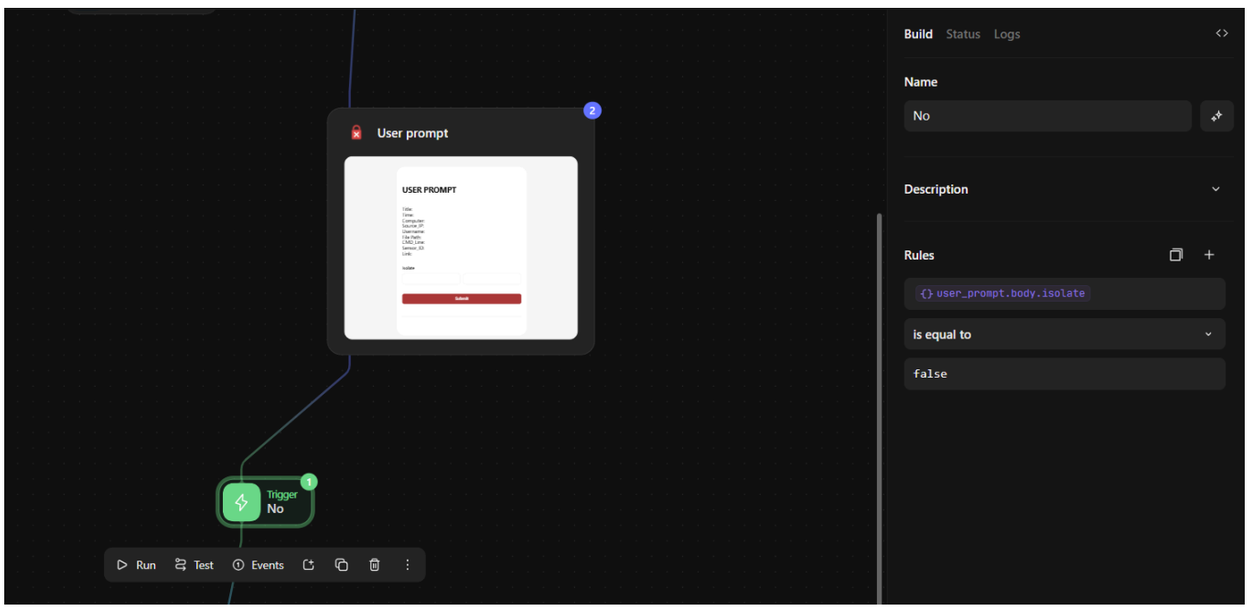


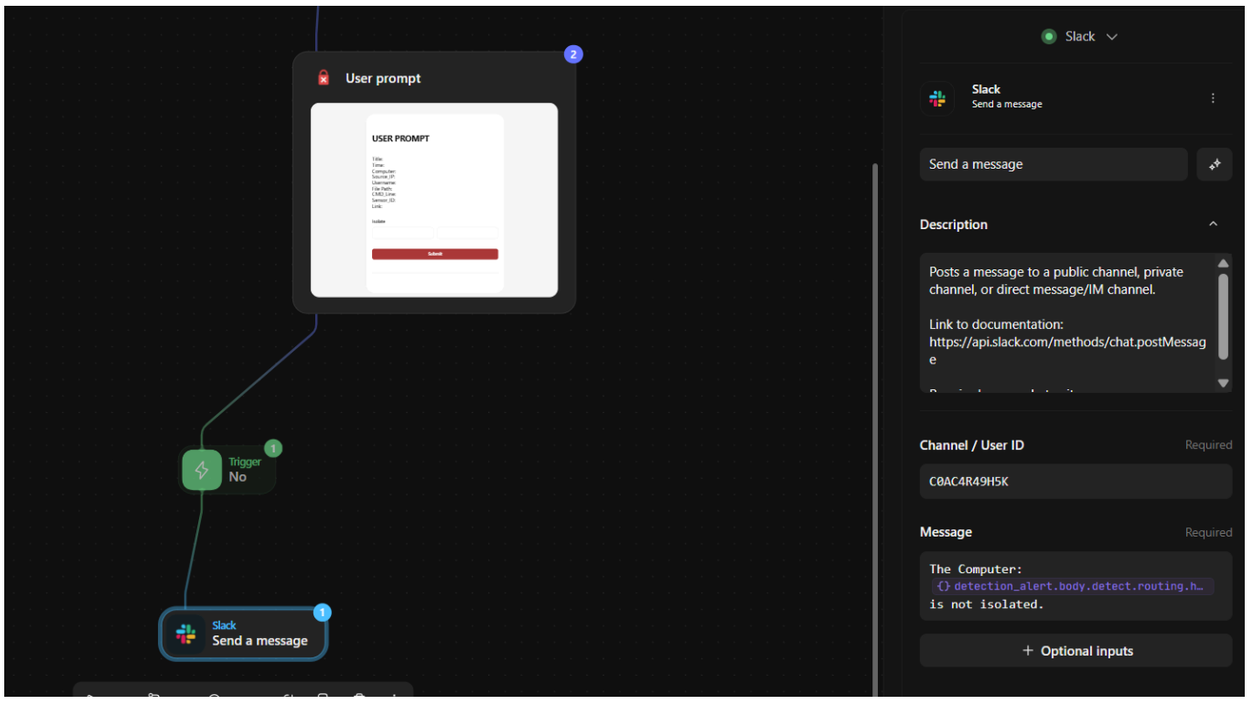


- after the isolation , running a ping operation to check the network connection and we can see that we arenot getting any response back (getting GENERAL FAILURE), Cuz we are isolated the Machine .
  This step demonstrates automated containment with verification.

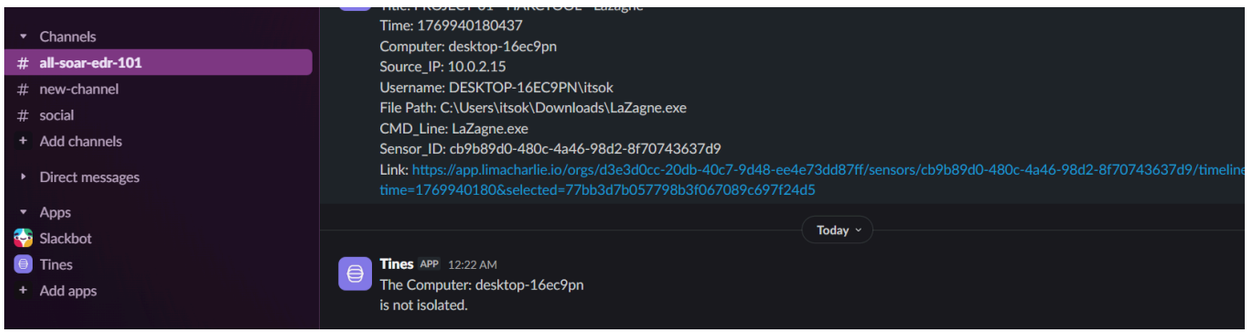
8 No Isolation Path (If NO)

If the analyst selected **NO**, the system did not isolate the endpoint. Instead, Tines sent a Slack message stating that the machine was not isolated and required further investigation. This maintains visibility while allowing analysts to continue manual investigation.



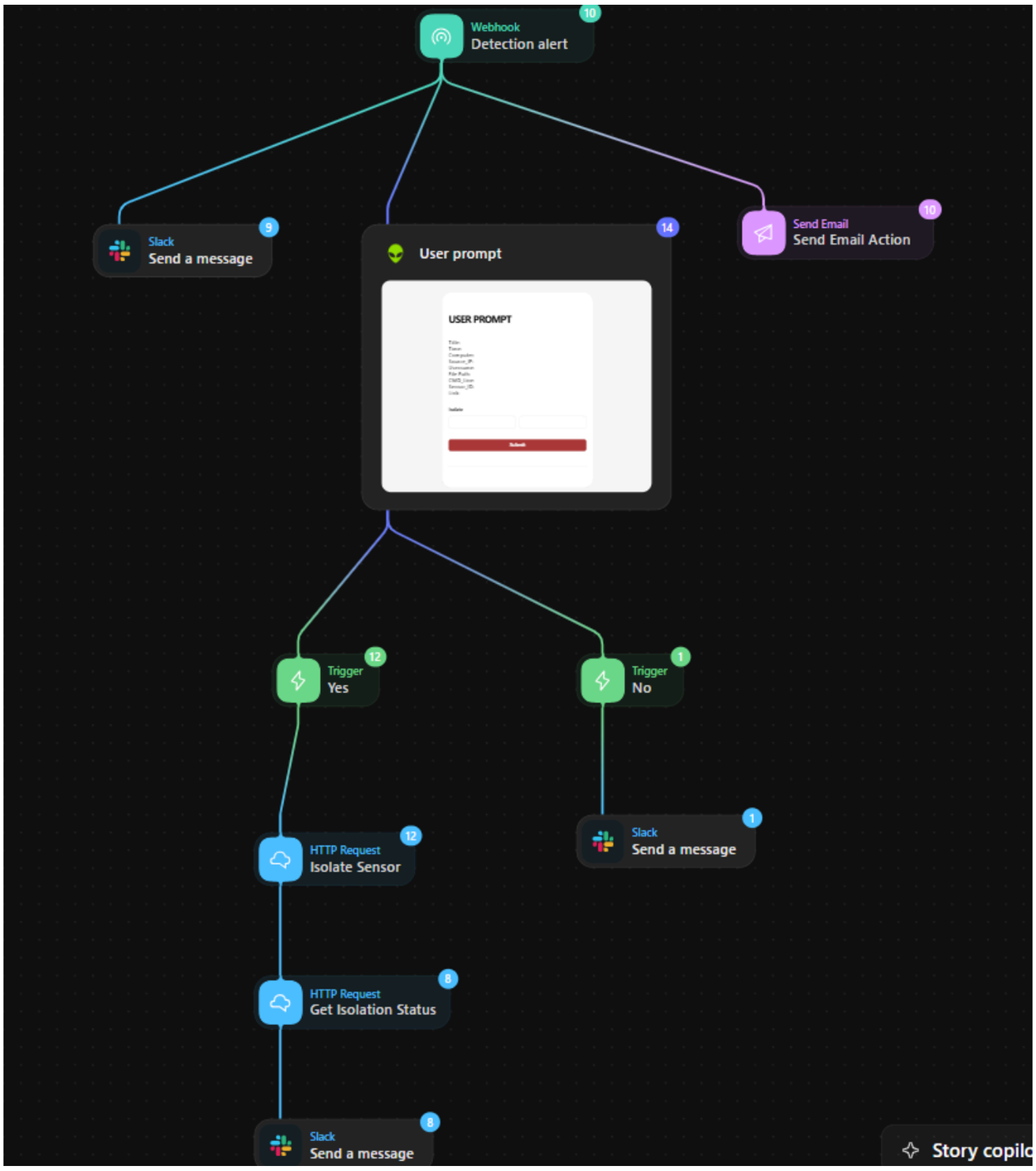


- here if the analyst (user prompt) selected "NO" then details containing about the detection will be sent to slack that "the computer is not isolated ", do furthur investigation.



Final Playbook Workflow

1. Suspicious process executes on the endpoint
2. LimaCharlie detects the activity
3. Detection event sent to Tines via webhook
4. Slack and Email alerts sent to analysts
5. Analyst decision requested through Tines page
6. If YES → Endpoint isolated automatically
7. Isolation status verified and reported



This workflow reflects a real-world SOC playbook combining automation and analyst oversight.

🎯 Skills Demonstrated

- Endpoint Detection & Response deployment
- Detection engineering using real telemetry
- SOAR playbook design and automation
- Webhook-based platform integration
- API-driven security response actions
- Human-in-the-loop incident response
- Real-time SOC alerting and communication