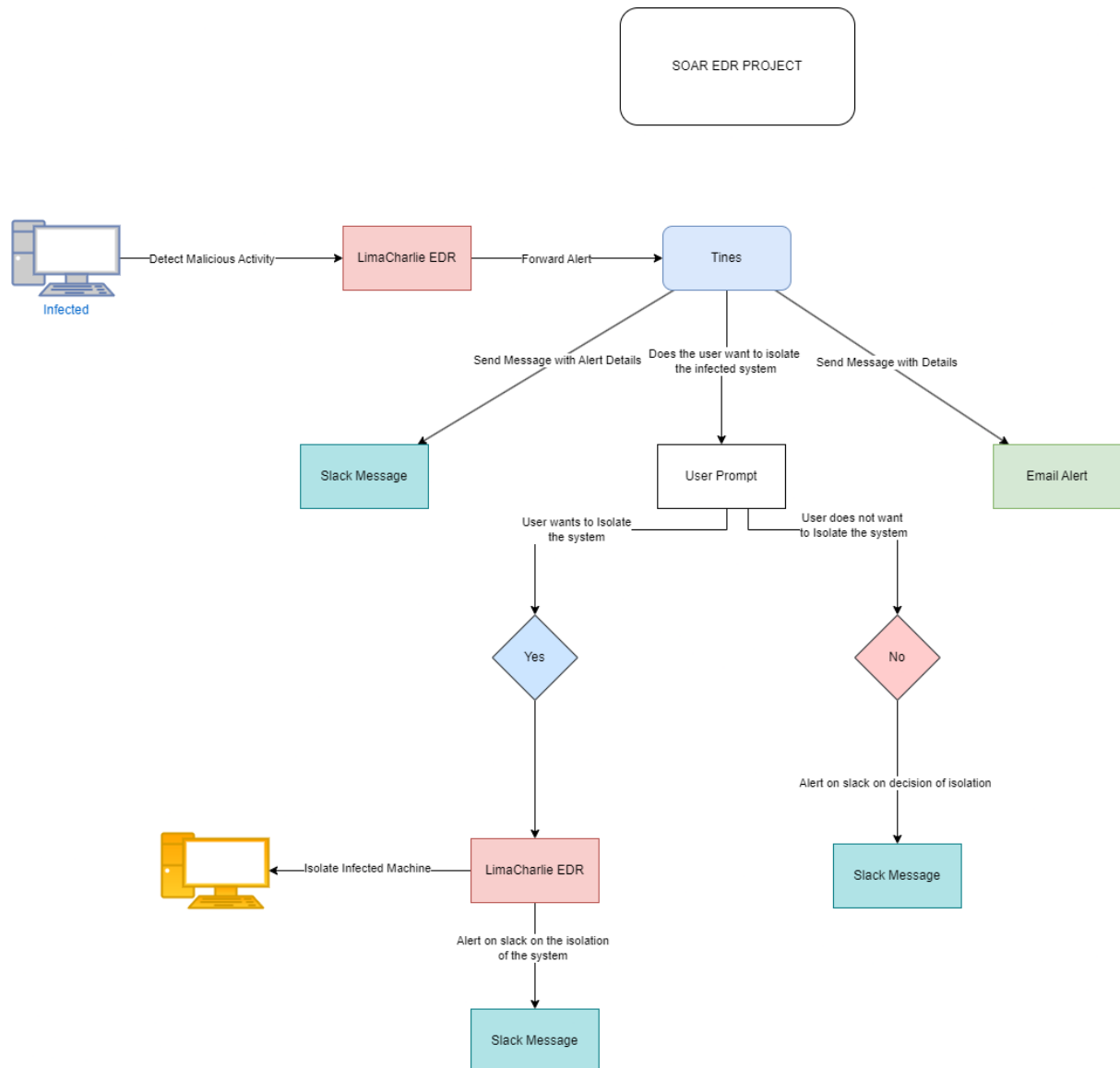


Workflow



LimaCharlie Setup:

1. **Sign Up:** Head over to LimaCharlie and create an account using **email, Google, GitHub, or Microsoft**.
2. **Organization Creation:**
 - Set up an organization in **LimaCharlie**.

Create a new organization

Select a region, plan, and organization name to get started. The first 2 Sensors in your new org will be free - no credit card required.

Name
SOAR-EDR-PROJ

Data Residency Region ⓘ
India

Template ⓘ
No pre-configurations

- Start an empty tenant with nothing pre-configured
- Enable the capabilities you need as you need them, or
- Apply your own template using LimaCharlie's infrastructure as code functionality

Create Organization

Step 1: Download LimaCharlie

1. Access Installation Keys:

- Navigate to the installation keys section on the LimaCharlie website.
- Generate a new installation key for the project.

Create Installation Key

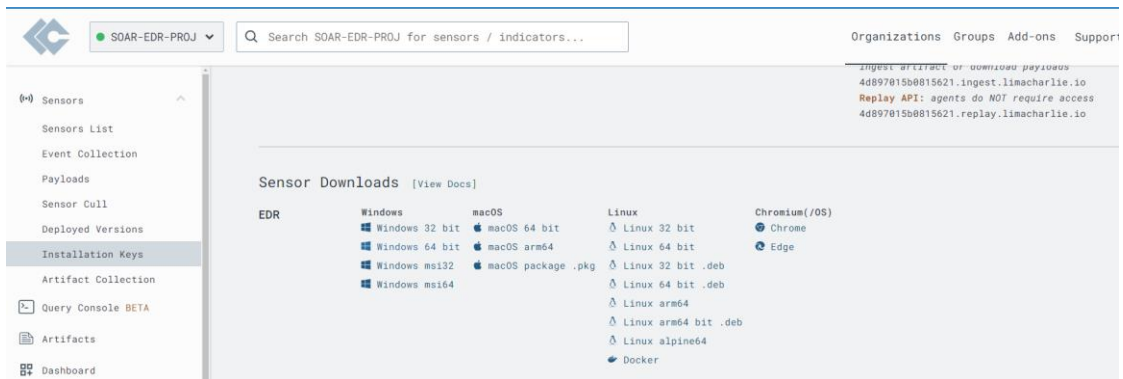
Description
SOAR-EDR-PROJ

Tags (optional)
i.e. 'vpn, workstations'

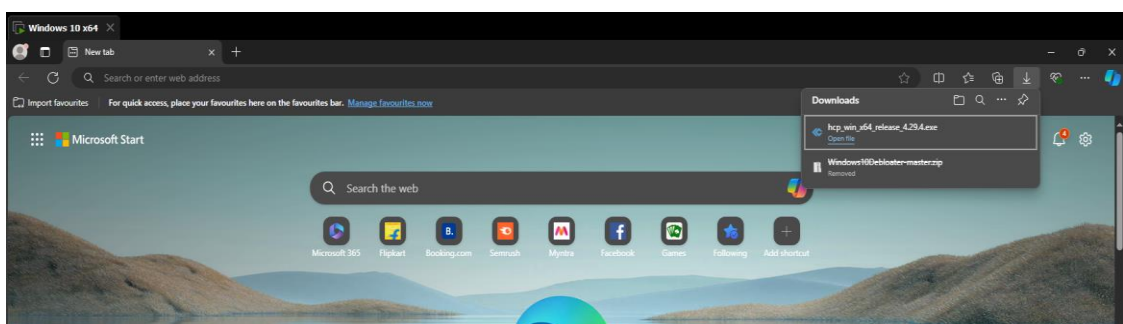
Create

2. Download EDR:

- Scroll down to the "Center Downloads" section.
- Under the EDR section, locate the download for Windows 64-bit.

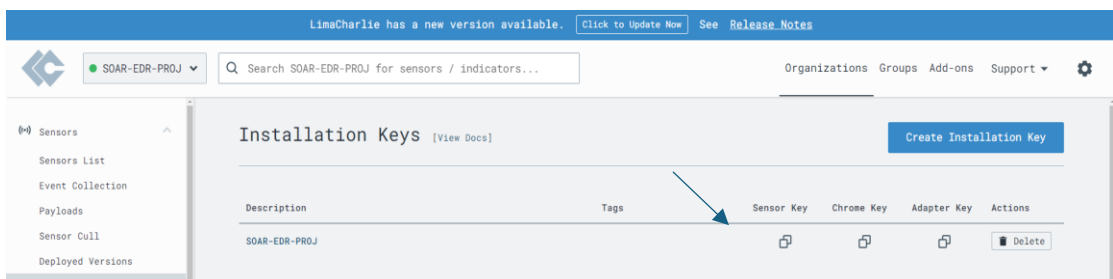


- Right-click the download link and select "Copy Link Address."
- Open your server environment and paste the link to start the download.



3. Copy Sensor Key:

- While the LimaCharlie installation is downloading, scroll up to find and copy your sensor key. This key will be used as the installation key for your server.



Step 2: Install LimaCharlie

1. Open PowerShell:


- Run PowerShell as an administrator by right-clicking the icon and selecting "Run as Administrator."

2. Navigate to Downloads Directory:

- Type the following commands:

```
cd downloads
dir
```

- You should see the LimaCharlie executable file listed.



The screenshot shows a Windows PowerShell window titled "Select Administrator: Windows PowerShell". The prompt is "PS C:\Users\admin>". The user enters "cd Downloads", and the prompt changes to "PS C:\Users\admin\Downloads>". The user then enters "dir", which displays the contents of the Downloads folder. The output shows a directory listing for "C:\Users\admin\Downloads" with two files: "Windows10Debloater-master" and "hcp_win_x64_release_4.29.4.exe".

```
Select Administrator: Windows PowerShell

PS C:\Users\admin> cd Downloads
PS C:\Users\admin\Downloads> dir

Directory: C:\Users\admin\Downloads

Mode                LastWriteTime         Length Name
----                -
d-----          16/09/2024         17:04     Windows10Debloater-master
-a-----          16/09/2024         17:46     779568 hcp_win_x64_release_4.29.4.exe

PS C:\Users\admin\Downloads>
```

3. Install the Agent:

- To install the agent, type:

```
.\lima-charlie-executable-name.exe -i <sensor key>
```

- Replace `<sensor_key>` with the sensor key you copied earlier.
- Press Enter to initiate the installation. A success message should appear shortly.

[illegible]

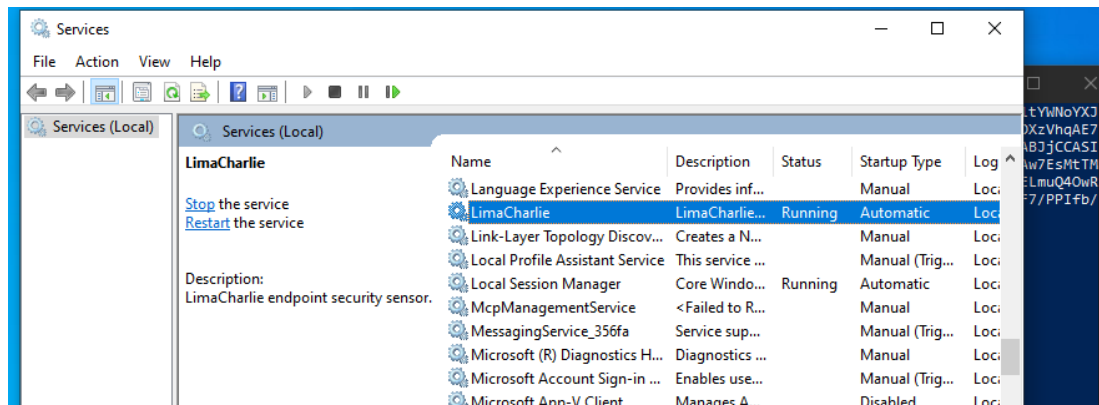
4. Check for Errors:

- If you encounter an error stating "service installed," you can ignore it. Proceed to check if the service is running.

Step 3: Verify Installation

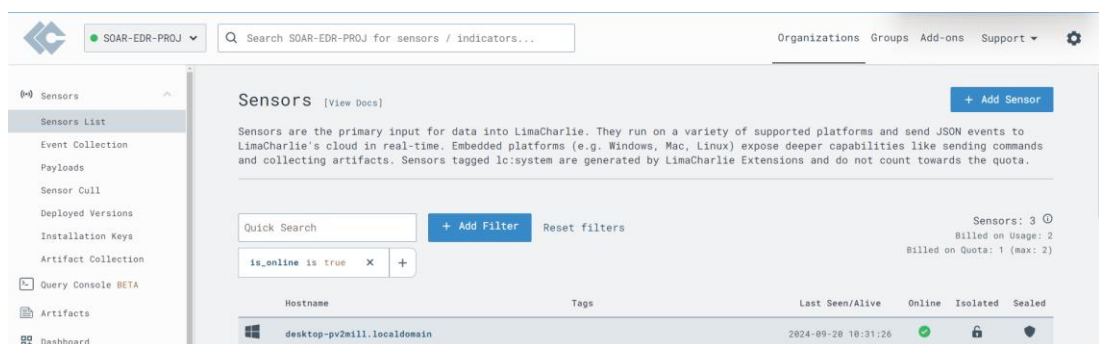
1. Check Services:

- Open the Services management console and filter by "Lima" to confirm the LimaCharlie service is active.



2. View Sensor Information:

- Log into your LimaCharlie dashboard and navigate to the Sensors list.
- Confirm that your server appears with the correct details such as hostname, network access, and sensor ID.



Key Features Explored

1. Auto Runs

- Under the **Analytics** section, you can view Auto Runs, which lists all auto-starting programs. This is crucial for identifying potential persistence mechanisms.

2. Console Commands

- The **Console** section allows you to run remote commands. For example, using `netstat` to check for active network connections can help identify suspicious processes.

3. Event Collection

- LimaCharlie collects various events from your server, providing insights into system activities.

4. File System Access

- Navigate the file system to inspect files, hashes, and timestamps. You can even perform malware analysis by downloading potentially malicious files.

5. Integrity Monitoring

- File Integrity Monitoring (FIM) enables you to detect changes in file states, which is essential for security audits.

6. Process Management

- Monitor active processes, view modules, and even kill suspicious processes. Detailed information about each process can help in investigating anomalies.

7. User Management

- The Users section displays existing users on the server, which can be useful for detecting unauthorized accounts.

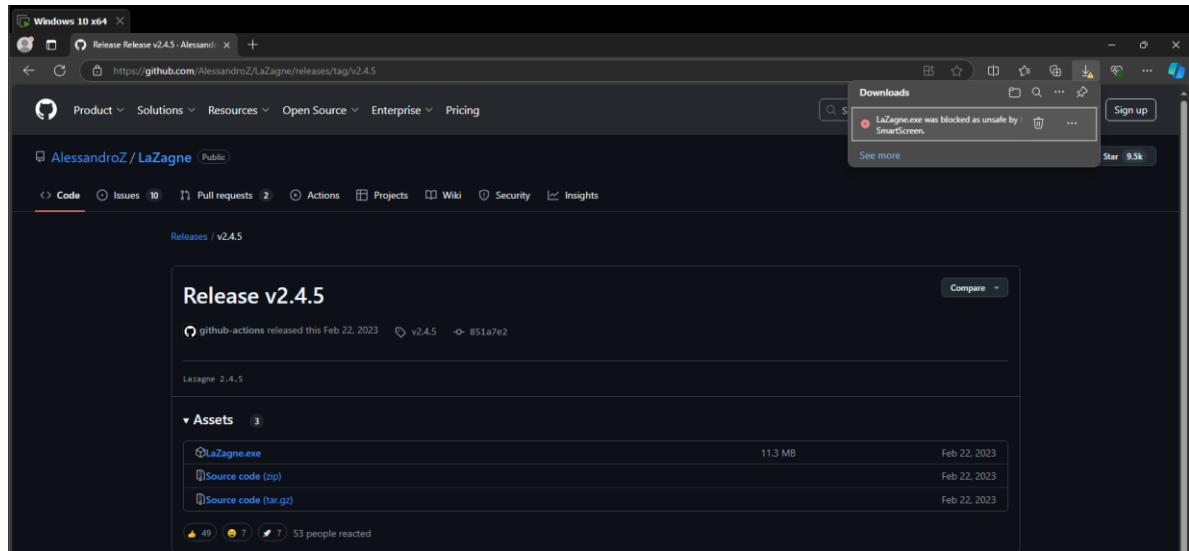
8. Timeline Analysis

- The Timeline feature allows you to track events chronologically, making it easier to investigate incidents based on user-reported issues.

Downloading and Installing Lasagna for Testing

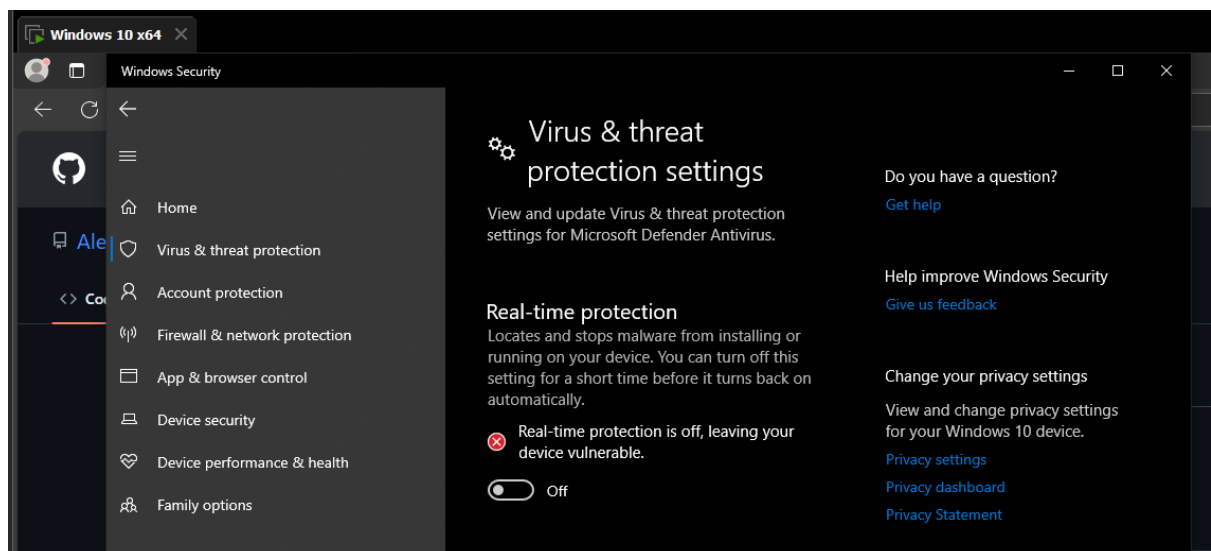
1. Download Lasagna:

- Navigate to the [Lasagna GitHub](#).
- Download the executable (lasagna.exe) from the "Releases" section.



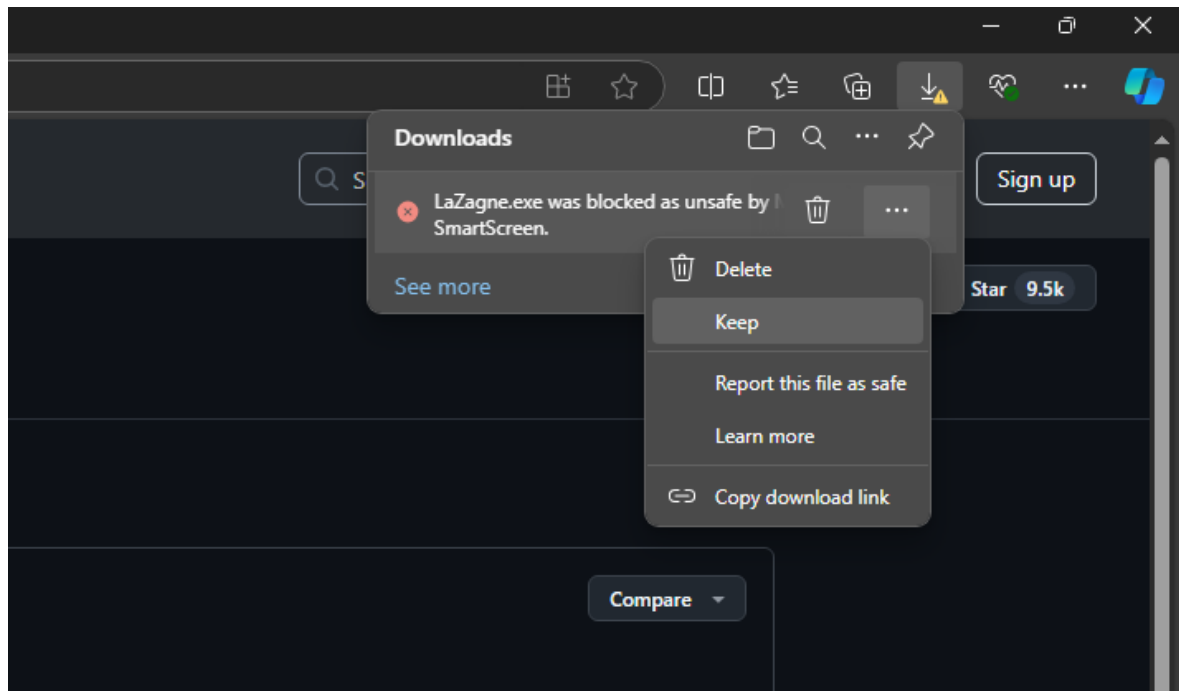
2. Disable Windows Security:

- Open "Windows Security."
- Select "Virus & Threat Protection" and click "Manage Settings."
- Disable "Real-time protection."



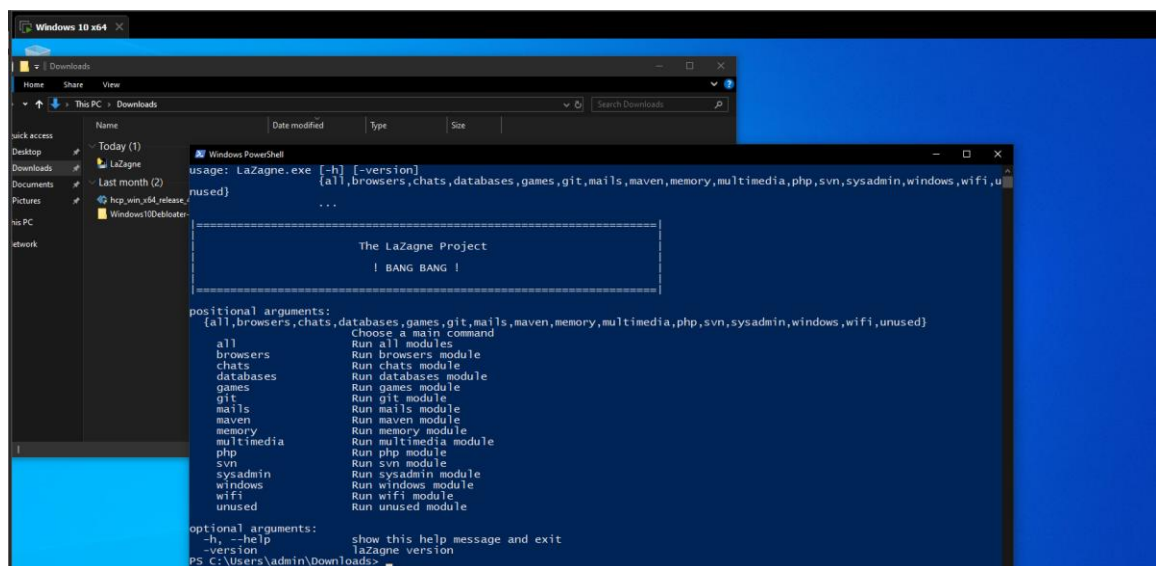
3. Bypass Defender's Warning:

- When Lasagna is blocked by Microsoft Defender SmartScreen, click on the three dots next to the warning.
- Select "Keep" to download it, ignoring the warning that it is unsafe.



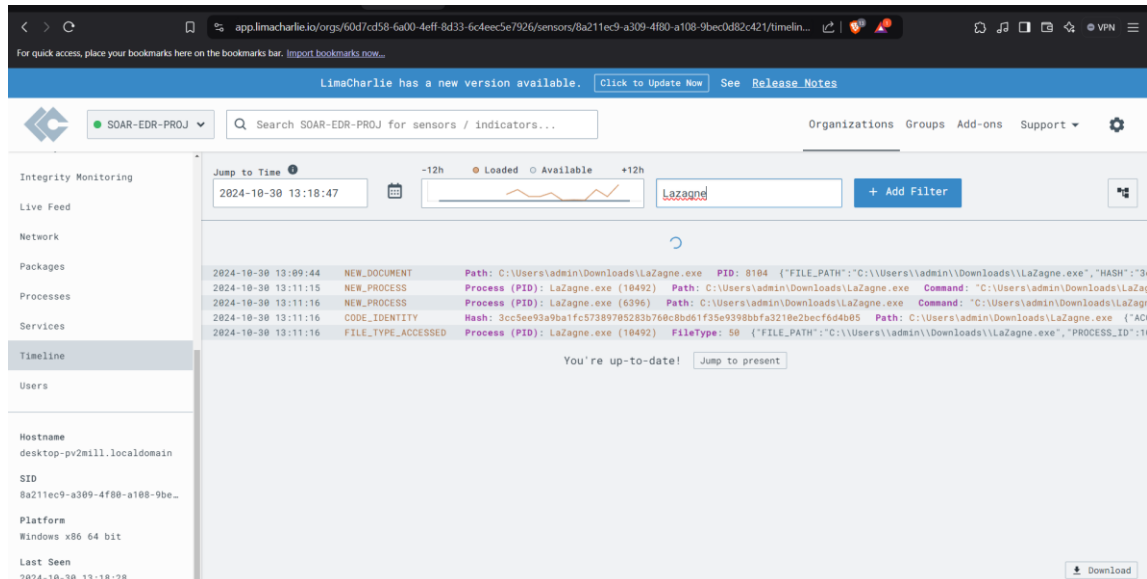
4. Run Lasagna in PowerShell:

- Open the download folder and launch PowerShell.
- Hold **Shift + Right-click** and choose "Open PowerShell window here."
- Execute lasagna in the terminal.



5. Verify Activity in Lima Charlie:

- Head over to Lima Charlie.
- Navigate to the **Sensors List** and click on the relevant sensor.
- Go to the **Timeline** and filter for events by typing "lasagna" to confirm its execution was detected.

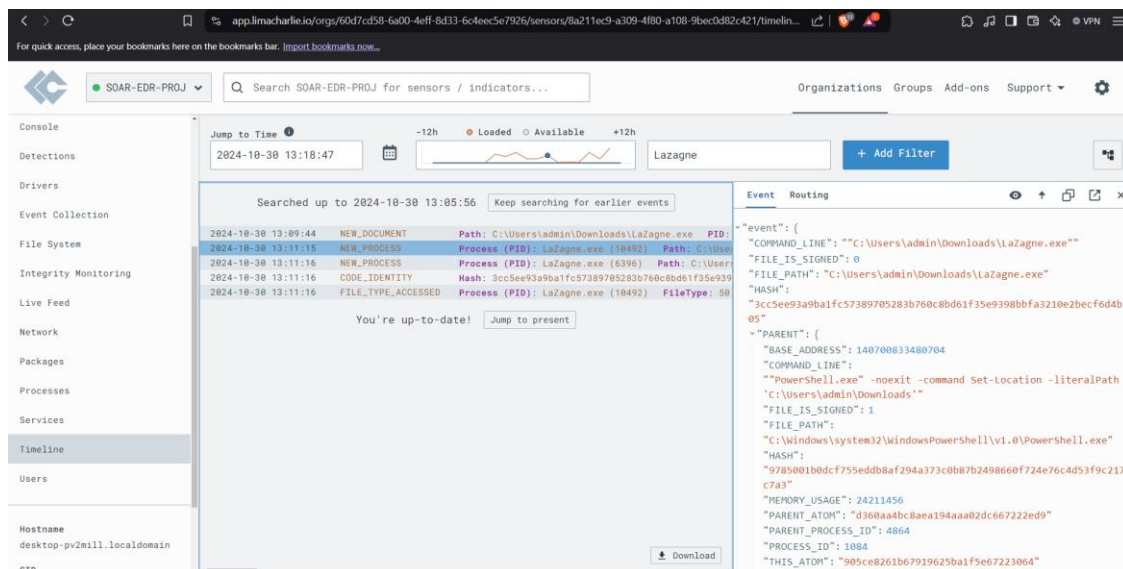


The screenshot shows the LimaCharlie web interface. The top navigation bar includes a search bar and a filter dropdown set to 'SOAR-EDR-PROJ'. The left sidebar shows various monitoring categories, with 'Timeline' selected. The main area displays a timeline of events for the sensor 'Lazagne'. The events table is as follows:

Timestamp	Event Type	Details
2024-10-30 13:09:44	NEW_DOCUMENT	Path: C:\Users\admin\Downloads\Lazagne.exe PID: 8184 {"FILE_PATH": "C:\Users\admin\Downloads\Lazagne.exe", "HASH": "3c5e93a9ba1fc57389705283b760c8bd61f35e9398bfa3210e2becf6d4b85"}
2024-10-30 13:11:15	NEW_PROCESS	Process (PID): Lazagne.exe (18492) Path: C:\Users\admin\Downloads\Lazagne.exe Command: "C:\Users\admin\Downloads\Lazagne.exe"
2024-10-30 13:11:16	NEW_PROCESS	Process (PID): Lazagne.exe (6396) Path: C:\Users\admin\Downloads\Lazagne.exe Command: "C:\Users\admin\Downloads\Lazagne.exe"
2024-10-30 13:11:16	CODE_IDENTITY	Hash: 3c5e93a9ba1fc57389705283b760c8bd61f35e9398bfa3210e2becf6d4b85 Path: C:\Users\admin\Downloads\Lazagne.exe {"ACC": "C:\Users\admin\Downloads\Lazagne.exe", "PROCESS_ID": 18492}
2024-10-30 13:11:16	FILE_TYPE_ACCESSED	Process (PID): Lazagne.exe (18492) FileType: 58 {"FILE_PATH": "C:\Users\admin\Downloads\Lazagne.exe", "PROCESS_ID": 18492}

6. Extract Information:

- Examine the **new process event**.
- Collect information like:
 - File path (C:\Users\Administrator\Downloads)
 - Process ID
 - Command-line arguments, etc.

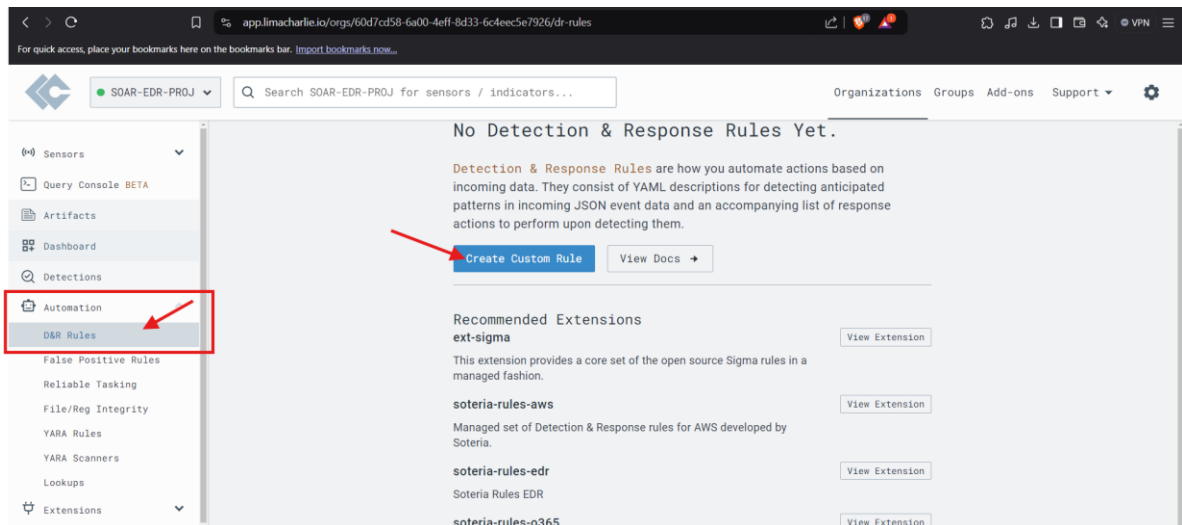


The screenshot shows the LimaCharlie web interface with the 'Timeline' view selected. The search filter 'Lazagne' is applied. The events table is the same as in the previous screenshot. The 'Event Routing' panel on the right shows the detailed JSON data for the selected event:

```
{
  "event": {
    "COMMAND_LINE": "C:\\Users\\admin\\Downloads\\Lazagne.exe",
    "FILE_IS_SIGNED": 0,
    "FILE_PATH": "C:\\Users\\admin\\Downloads\\Lazagne.exe",
    "HASH": "3c5e93a9ba1fc57389705283b760c8bd61f35e9398bfa3210e2becf6d4b85",
    "PARENT": {
      "BASE_ADDRESS": 140700833480704,
      "COMMAND_LINE": "PowerShell.exe -noexit -command Set-Location -literalPath 'C:\\Users\\admin\\Downloads\\'",
      "FILE_IS_SIGNED": 1,
      "FILE_PATH": "C:\\Windows\\system32\\WindowsPowerShell\\v1.0\\PowerShell.exe",
      "HASH": "9785001b0dcf755eddbaf29a373c0b87b2498660f724e76c4d53f9c217c7a3",
      "MEMORY_USAGE": 24211456,
      "PARENT_ATOM": "d360aaahc8aea194aaa02dc667222ed9",
      "PARENT_PROCESS_ID": 4864,
      "PROCESS_ID": 1884,
      "THIS_ATOM": "905ce8261b67919625ba1f5e7223064"
    }
  }
}
```

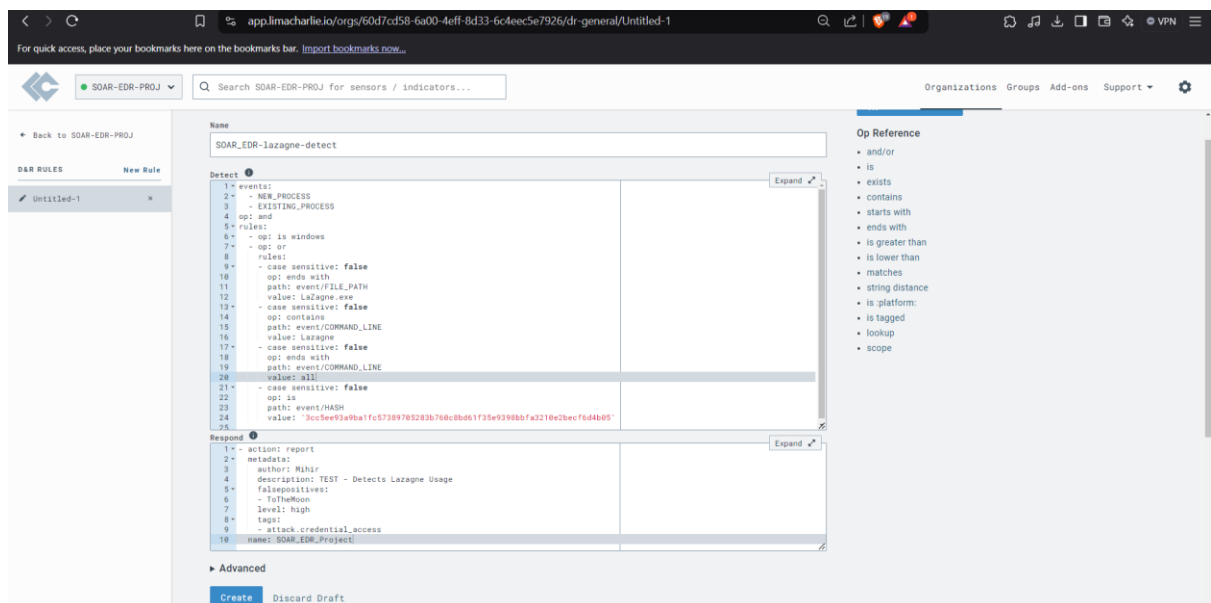
7. Create Detection Rule:

- In Lima Charlie, go to your organization and navigate to **Automation > DNR Rules**.
- Click **New Rule** to begin.



8. Write the Rules:

- Modify it to suit the Lasagna detection by filtering based on "process creation."



9. Testing the Rule:

- In the rule editor, click **Target Event** to test it.
- Paste the event and check if the rule triggers successfully.

For quick access, place your bookmarks here on the bookmarks bar. [Import bookmarks now...](#)

SOAR-EDR-PROJ

Search SOAR-EDR-PROJ for sensors / indicators...

Organizations Groups Add-ons Support

Back to SOAR-EDR-PROJ

D&R RULES New Rule

SOAR_EDR-Lazagne-Detect

```

27 },
28 "USER_NAME": "DESKTOP-PV2MILL\\admin",
29 "routing": {
30   "arch": 2,
31   "did": "-",
32   "event_id": "a7d2701e-5d9f-4812-9a28-41a7b995535e",
33   "event_time": 17382354442,
34   "event_type": "NEW_PROCESS",
35   "ext_ip": "27.59.52.192",
36   "hostname": "desktop-pv2m111.localdomain",
37   "id": "88c99833-e2f7-4f7c-bf14-29318393a28b",
38   "int_ip": "192.168.129.149",
39   "moduleid": 2,
40   "uid": "66d7cd58-6a8b-4eff-8d33-6c4ec5e7926",
41   "parent": "6da52cfe4e807d955d0e9527223888",
42   "pid": 268435456,
43   "pid": "8a211ec9-a389-4f8b-a188-9becb8d2c421",
44   "tags": [],
45   "this": "6de711432935f99280a4fa2647223888"
46 },
47 "ts": "2024-10-30 13:45:44"
48 }

```

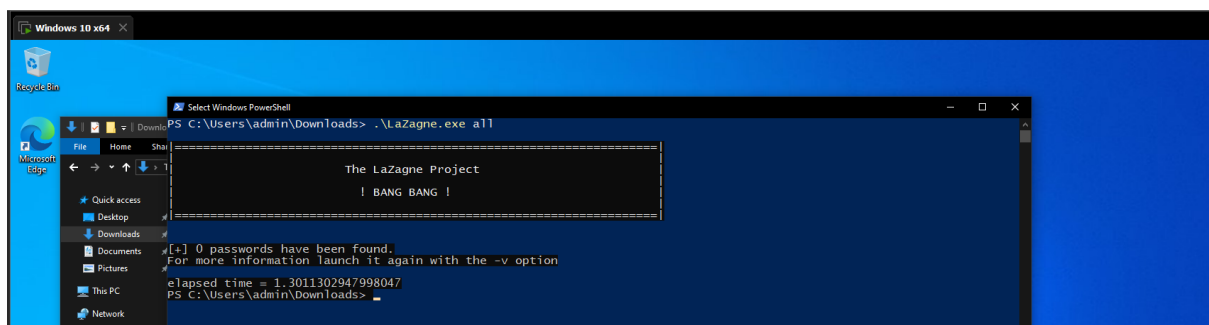
Test Event

Match. 4 operations were evaluated with the following results:

- true == (is windows) ({'op':'is windows'})
- true == (-ends with) ({'case sensitive':false,'op':'ends with','path':'event/FILE_PATH','value':'Lazagne.exe'})
- true == (or) ({'op':'or','rules':{'case sensitive':false,'op':'ends with','path':'event/FILE_PATH','value':'Lazagne.exe'}, {'case sensitive':false,'op':'contains','path':'event/CMDLINE','value':'Lazagne'}, {'case sensitive':false,'op':'ends with','path':'event/CMDLINE','value':'all'}, {'case sensitive':false,'op':'is','path':'event/HASH','value':'3cc5ee93a9ba1fc57389785283b76dc8bd61f35e9398bfa3218e2becf6d4b85'}})
- true == (and) ({'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':'contains','path':'event/CMDLINE','value':'Lazagne'}, {'case sensitive':false,'op':'ends with','path':'event/CMDLINE','value':'all'}, {'case sensitive':false,'op':'is','path':'event/HASH','value':'3cc5ee93a9ba1fc57389785283b76dc8bd61f35e9398bfa3218e2becf6d4b85'}})})

10. Generate Detections:

- Re-run lasagna from PowerShell with the --all flag to trigger the detection.



- Refresh the Lima Charlie dashboard to verify the detection.

For quick access, place your bookmarks here on the bookmarks bar. [Import bookmarks now...](#)

SOAR-EDR-PROJ

Search SOAR-EDR-PROJ for sensors / indicators...

Organizations Groups Add-ons Support

Sensors

Query Console BETA

Artifacts

Dashboard

Detections

Automation

Extensions

Outputs

Organization Settings

Access Management

Billing

Platform Logs

Detections [View Docs]

Select Source Jump to time

Select... 2024-10-30 14:03:30 Quick Search + Add Filter

You're up-to-date!

2024-10-30 14:03:07 SOAR_EDR-Project desktop-pv2m111.localdomain {"BASE_ADDRESS":"148699441438528","CMDLINE":"C:\Users\admin\Downloads\Lazagne.exe" all}

That's all! No more past detections to fetch.

2024-10-30 14:03:07 SOAR_EDR-Project desktop-pv2m111.localdomain {"BASE_ADDRESS":"148699441438528","CMDLINE":"C:\Users\admin\Downloads\Lazagne.exe" all}

Category Time

SOAR_EDR-Project 2024-10-30 14:03:07

Source

desktop-pv2m111.localdomain

View Event Timeline Mark False Positive

```

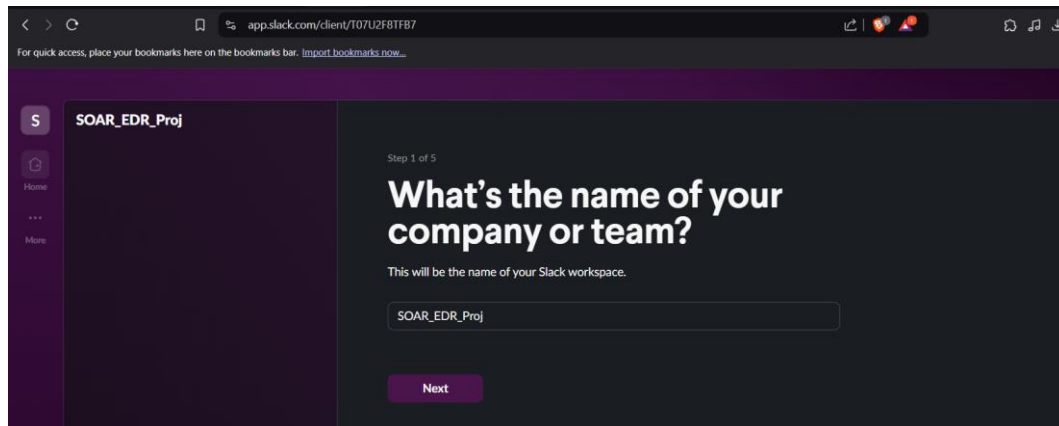
{"detection":{"author":"thejustinair57@gmail.com","cat":"SOAR_EDR-Project","detect":{"event":{"BASE_ADDRESS":"148699441438528","CMDLINE":"C:\Users\admin\Downloads\Lazagne.exe" all,"FILE_PATH":"C:\Users\admin\Downloads\Lazagne.exe","HASH":"3cc5ee93a9ba1fc57389785283b76dc8bd61f35e9398bfa3218e2becf6d4b85","MEMORY_USAGE":36868896},"parent":{"BASE_ADDRESS":"148699441438528","CMDLINE":"C:\Users\admin\Downloads\Lazagne.exe" all,"FILE_IS_SIGNED":0,"FILE_PATH":"C:\Users\admin\Downloads\Lazagne.exe","HASH":"3cc5ee93a9ba1fc57389785283b76dc8bd61f35e9398bfa3218e2becf6d4b85","MEMORY_USAGE":4255744,"PARENT_ATOM":"6f3a2f3b96e82cd743c18de67223881"}

```

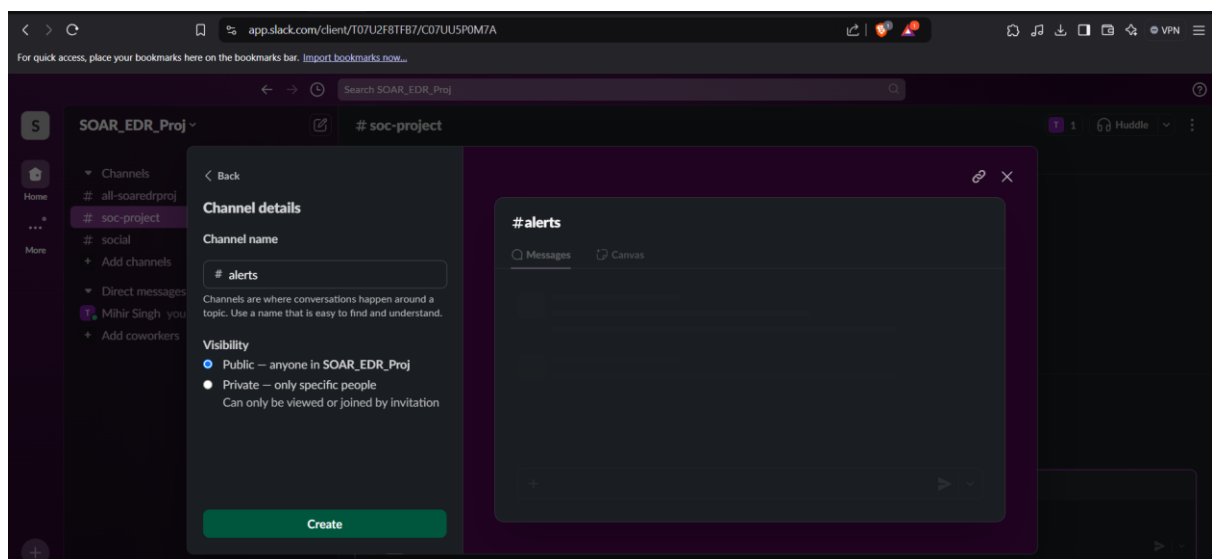
Setting Up Slack and Tines for Automation

Step 1: Setting Up Slack

1. Visit [Slack.com](https://slack.com) and create an account.
2. **Create a workspace:** name it something identifiable for the project.



3. **Add an Alerts Channel:**
 - Click on **Add channels > Create a new channel** and name it **alerts**.

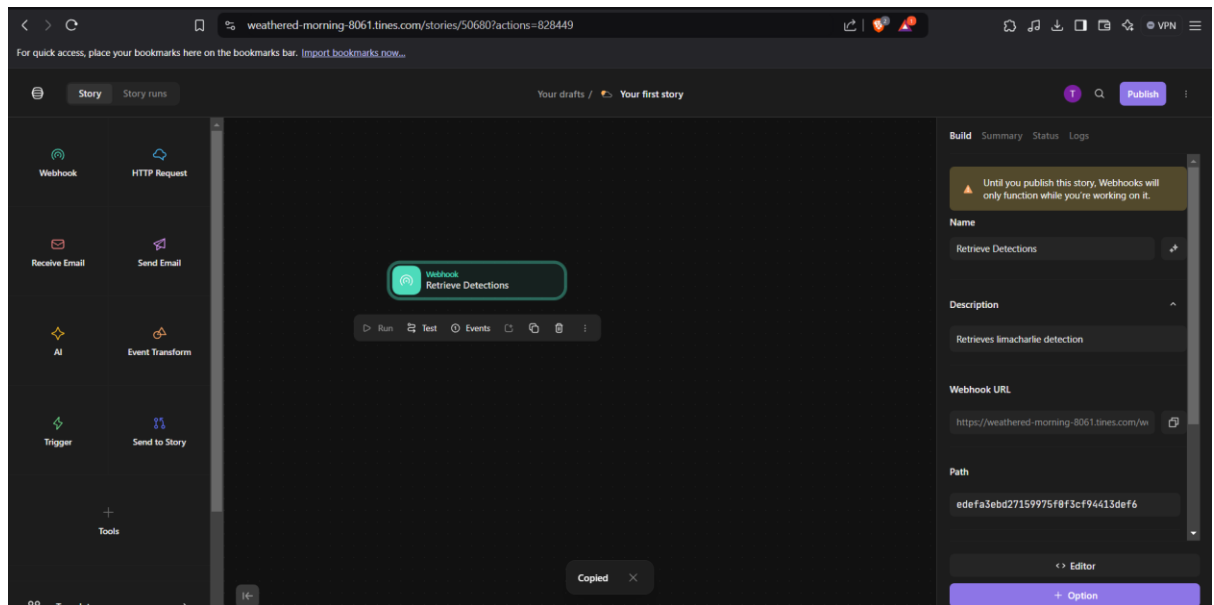


Step 2: Setting Up Tines

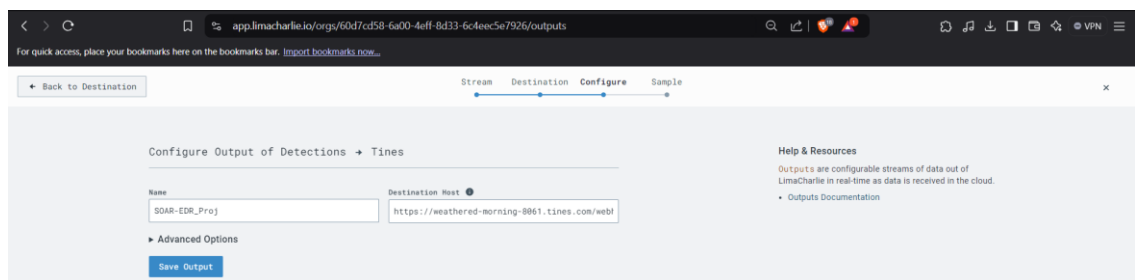
1. Go to [Tines](https://tines.io) and **sign up** using a valid email.
2. Familiarize yourself with the **action menu** on the left side. Here, you can add:
 - **Webhooks**
 - **HTTP requests**
 - **Pre-built templates** like **VirusTotal** for hash lookups and others for common automation tasks.

Step 3: Linking LimaCharlie and Tines

1. Start by creating a **Webhook in Tines**:
 - Name it `Retrieve Detections`.
 - Set the description to `Retrieve LimaCharlie detections`.
 - **Copy the Webhook URL** generated for use in LimaCharlie.

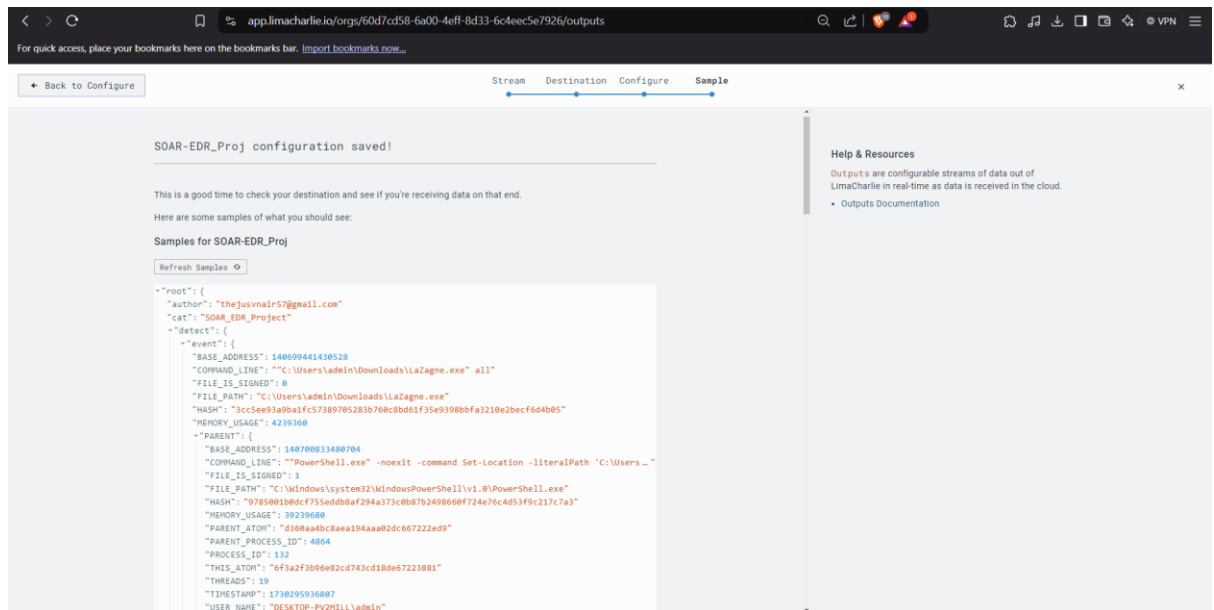


2. In **LimaCharlie**, configure the **Outputs**:
 - Under **Outputs**, click **Add Output** and select **Detections** (stream of detections from LimaCharlie's rule engine).
 - Select **Tines** as the output application (or Webhook if Tines isn't available).
 - Paste the Webhook URL copied from Tines.
 - Click **Save Output** to finalize.



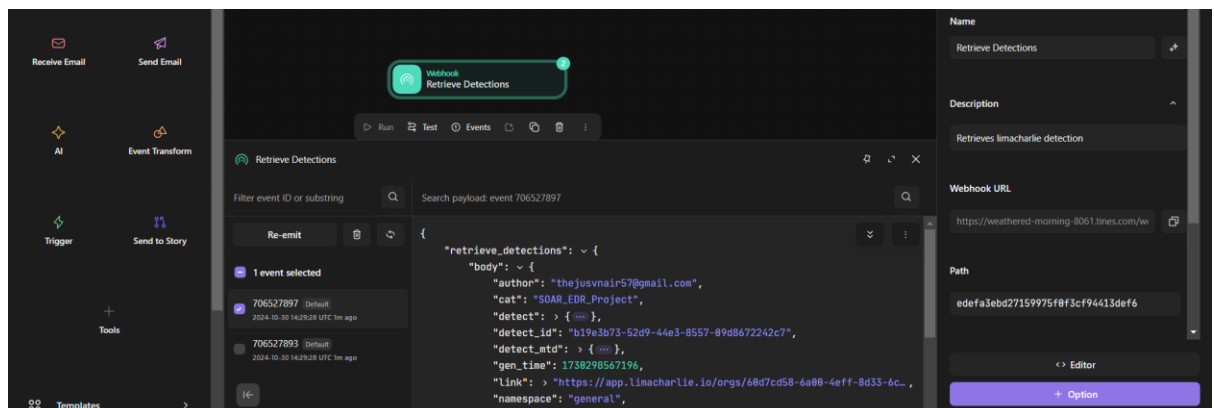
Step 4: Testing Detection

1. **Regenerate Detection**:
 - In your server environment, simulate a detection by running `lasagna` or another known test event.
 - Go back to the **Outputs** section in LimaCharlie and **refresh**. You should see the detection appear.



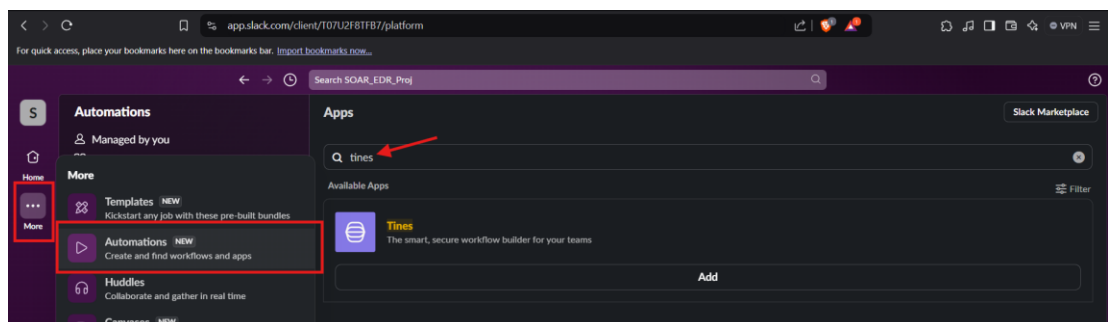
2. In **Tines**, verify the detection:

- Check under the **Retrieve Detections** webhook action and expand the **latest detection**.
- Confirm detection details like **title**, **command line**, **file path**, **hash**, and **username**.



3. Add the **Tines** Application in slack:

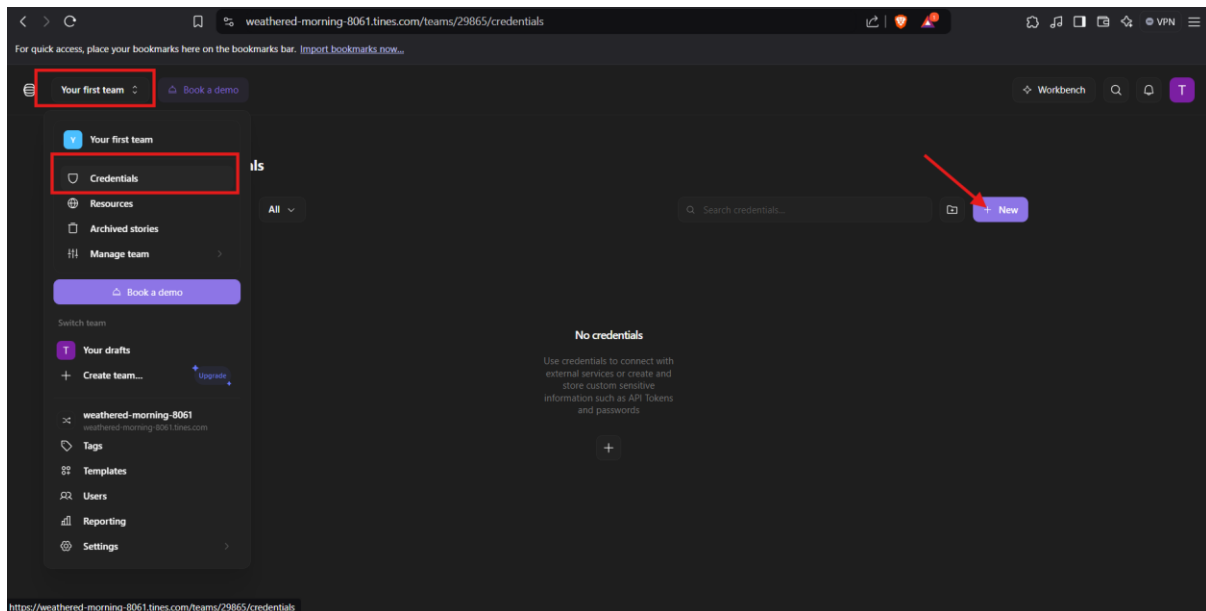
- Search for **Tines** in the **Slack App Directory** and add it.
- Accept permissions for Tines to send messages and create channels.



Step 5. Setting Up Tines

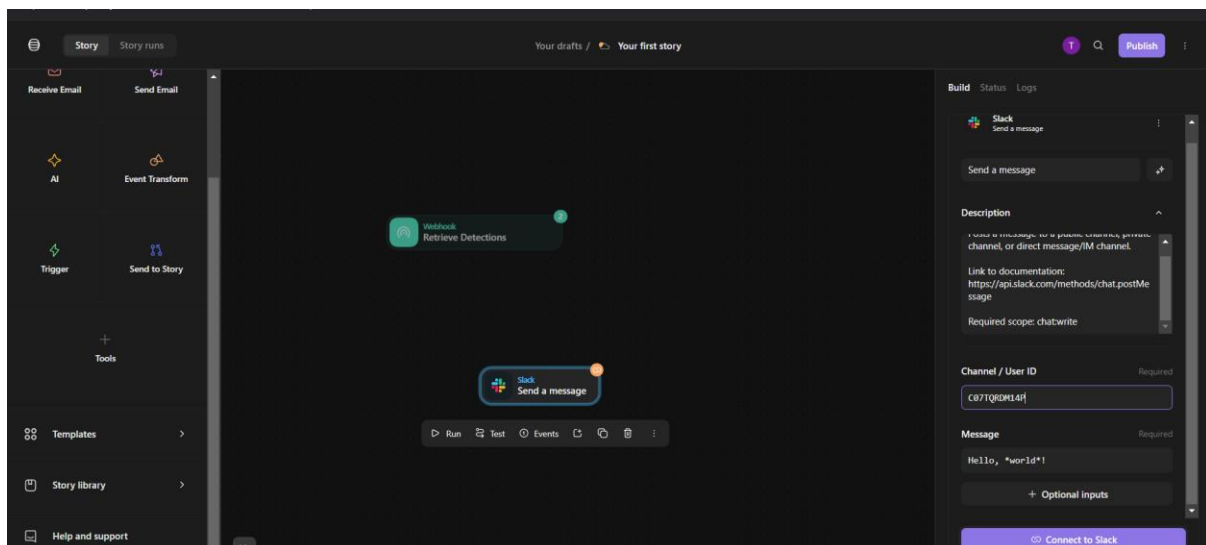
1. Establish a Link between Tines and Slack:

- Go to the **Credentials** section in Tines.
- Create a new Slack credential to connect Tines and Slack.
- Use this credential in the workflow to enable Tines to send alerts to the `alerts` channel in Slack.



Step 6. Connecting Slack to Tines

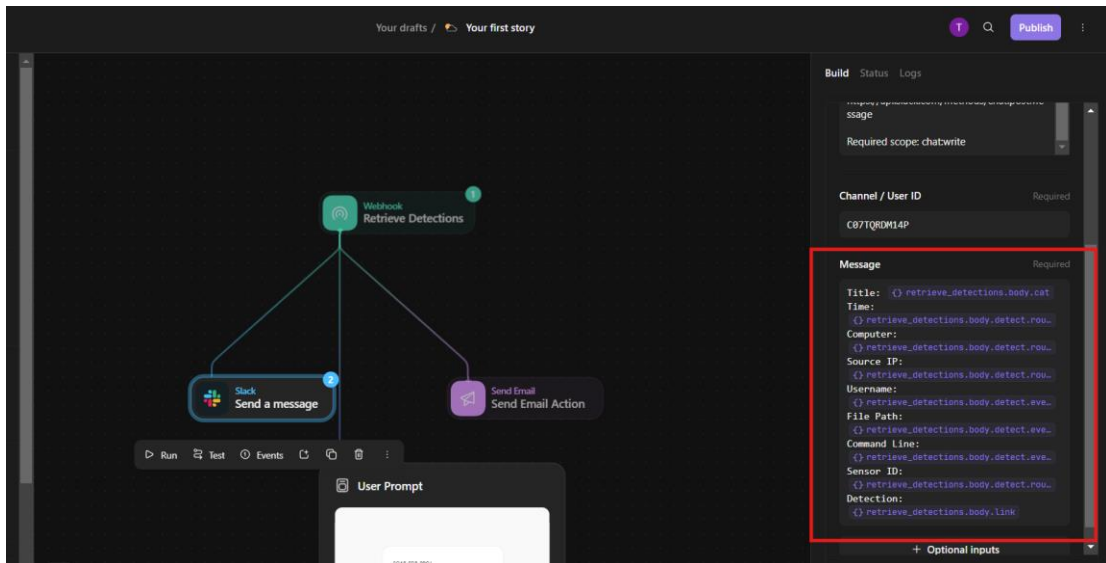
1. Back in **Tines**, use the **Slack template** from the **Templates Library**:
 - **Action:** Send a Message.
 - **Description:** Post a message to a public or private channel.
2. Use the channel identifier (ID) for `#alerts`:
 - Go to **Slack**, select **#alerts > Channel Details**.
 - Copy the **Channel ID** and paste it into the Tines configuration.



Step 7. Automating Alert Messaging in Slack

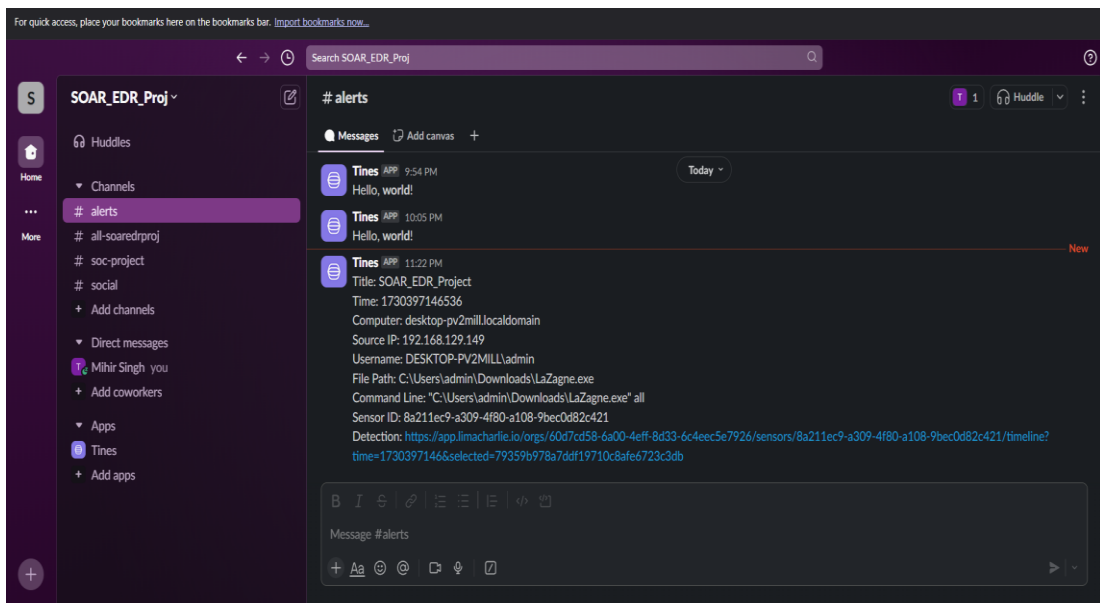
1. Configure Slack Messaging in Tines:

- Use the Slack action in Tines to send a message to the alerts channel upon receiving a detection.
- Customize the message with relevant detection details such as:
 - Detection time
 - Computer name
 - Source IP
 - Detection link for investigation



2. Test Slack Messaging:

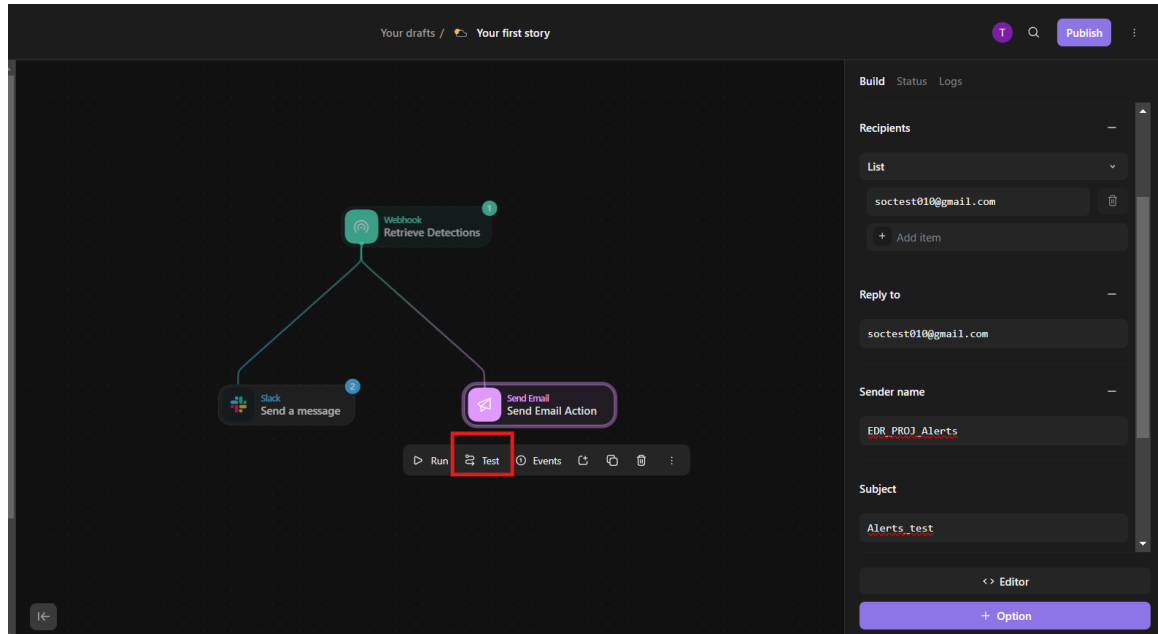
- Run the detection scenario to verify that Tines successfully posts an alert to Slack, containing all relevant information.



Step 8. Setting up Email Alerts in Tines

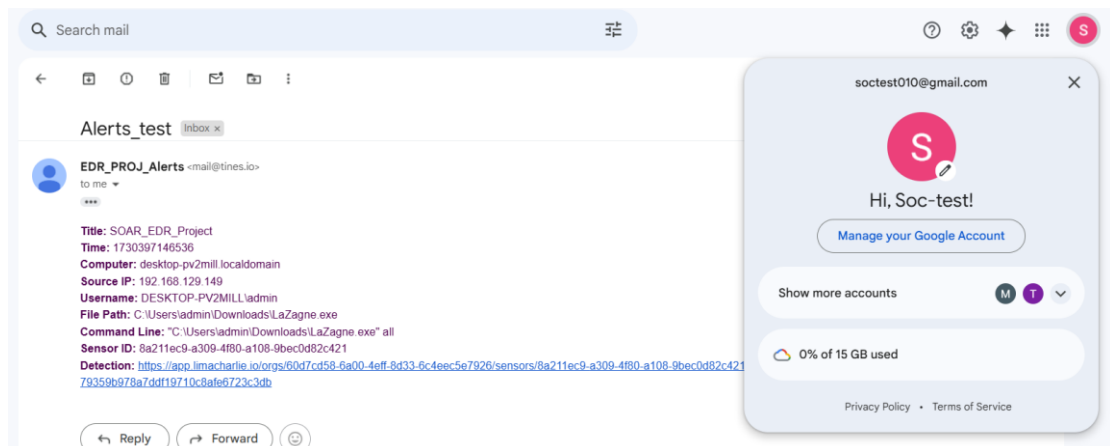
1. Create an Email Action:

- In Tines, add an **Email** action, using a disposable email address if necessary.
- Customize the email body with detection details similar to the Slack alert.



2. Test Email Alerts:

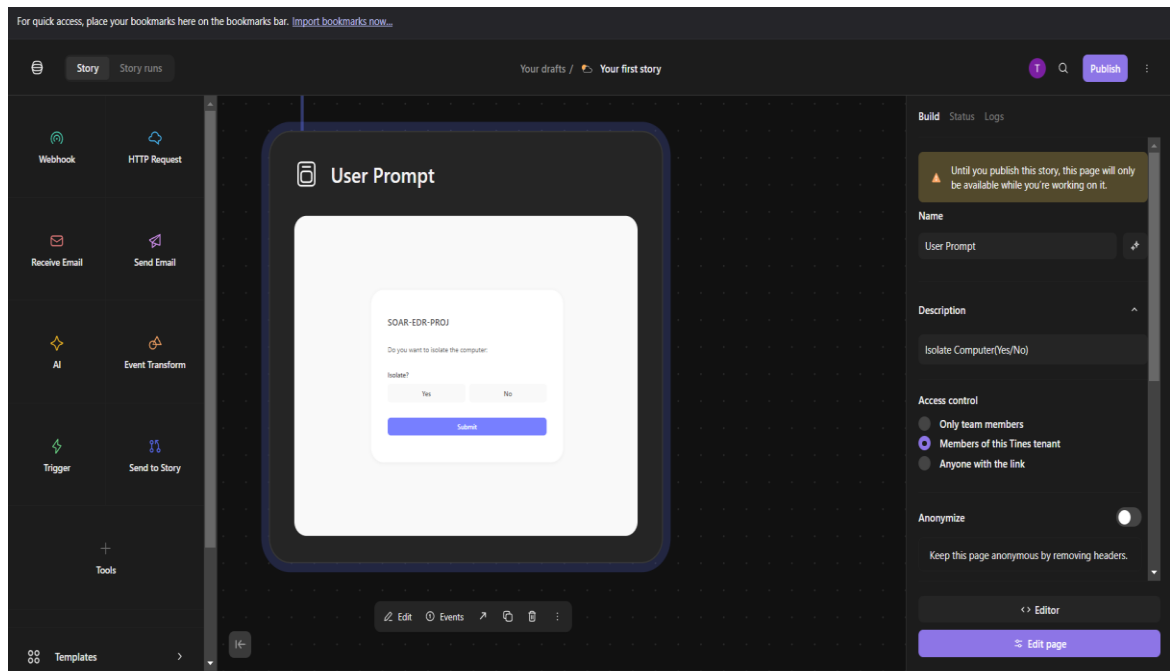
- Trigger a detection and confirm that an email is sent with the appropriate alert information.



Step 9. Adding a User Prompt for Isolation Decision

1. Create a User Prompt:

- In Tines, create a **Page** action to prompt the user with a Yes/No option to decide whether to isolate the affected machine.
- Include detection details in the prompt so the user can make an informed decision.



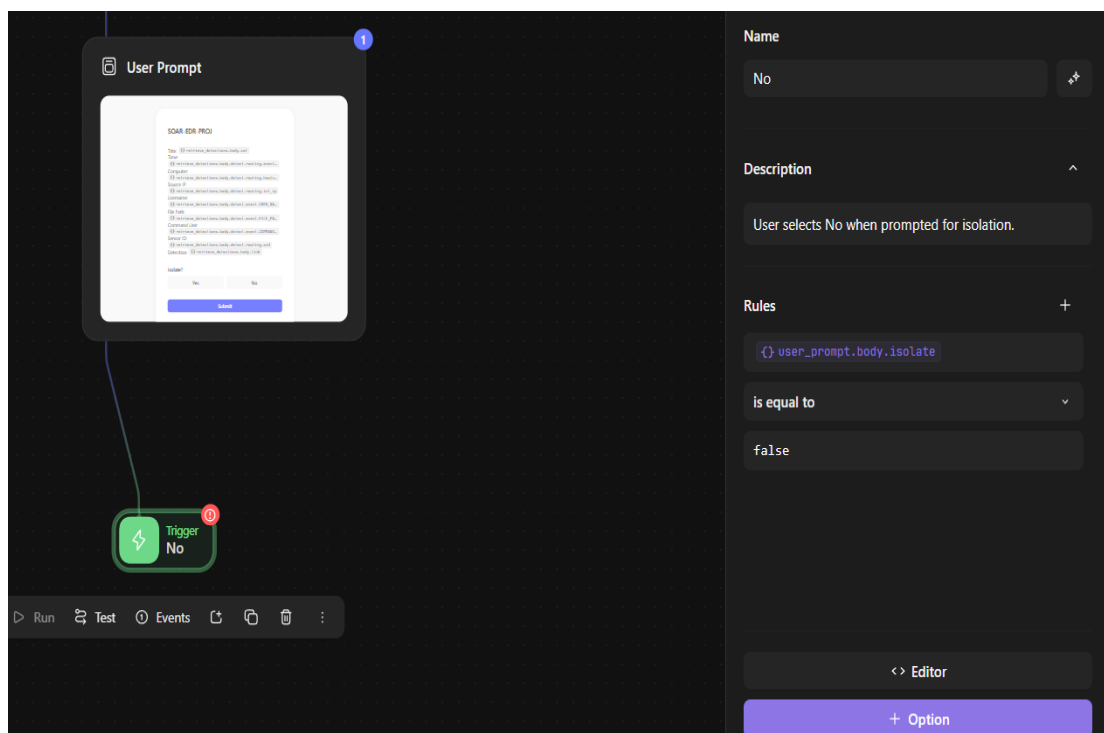
2. If-Else Actions for User Response:

- Use **If-Else** actions to handle responses:
 - If Yes, trigger isolation through LimaCharlie.
 - If No, send a Slack message to indicate that isolation was not performed.

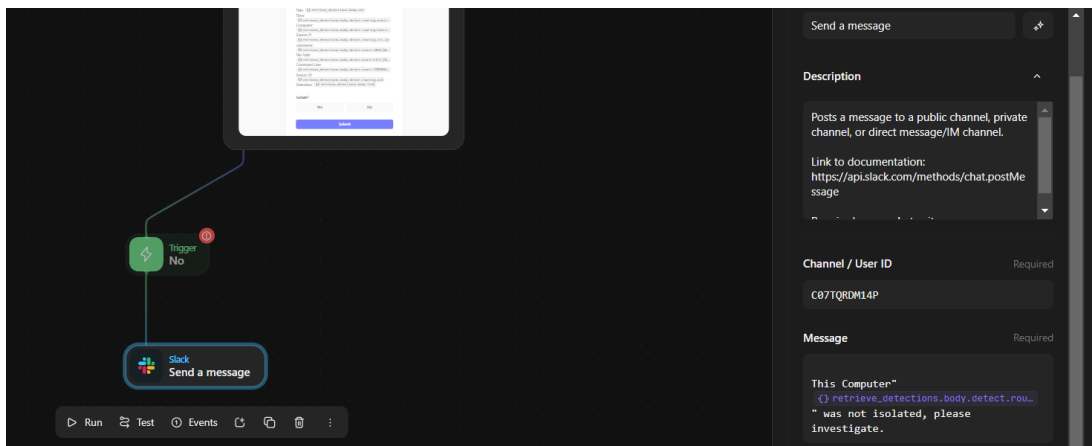
Step 10. Handling the scenario where the user selects 'NO' for isolation

1. Add Trigger:

- Add trigger in the flow chart and connect it with user prompt page.



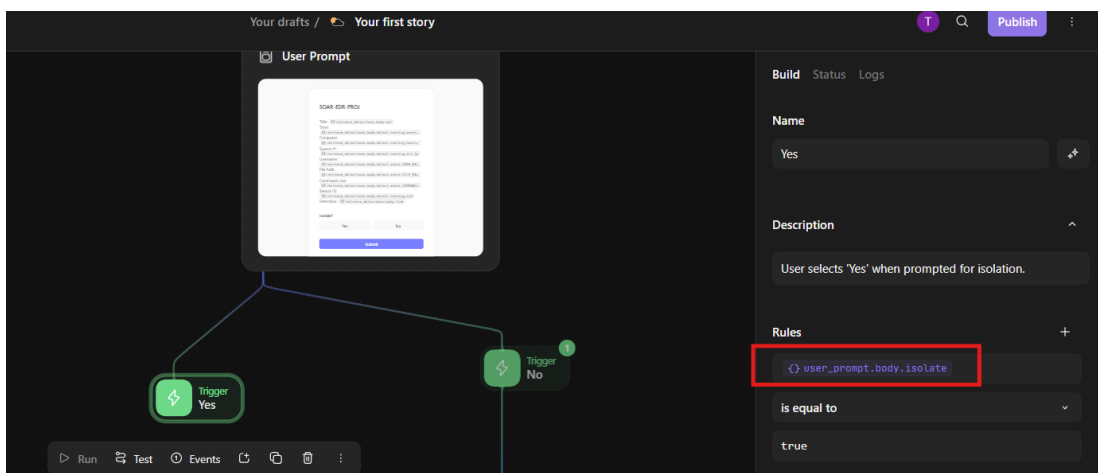
- Add a new slack to send message as shown in the flow chart.



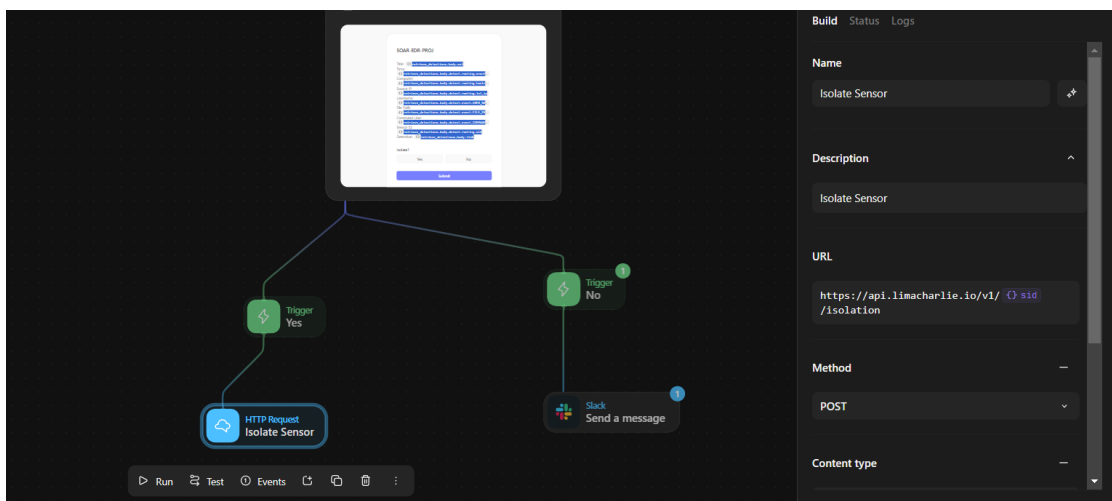
Step 11. Automating Machine Isolation in LimaCharlie

1. Add new Trigger Action:

- Add new Trigger “Yes” to the flowchart and add the isolate path from user prompt.

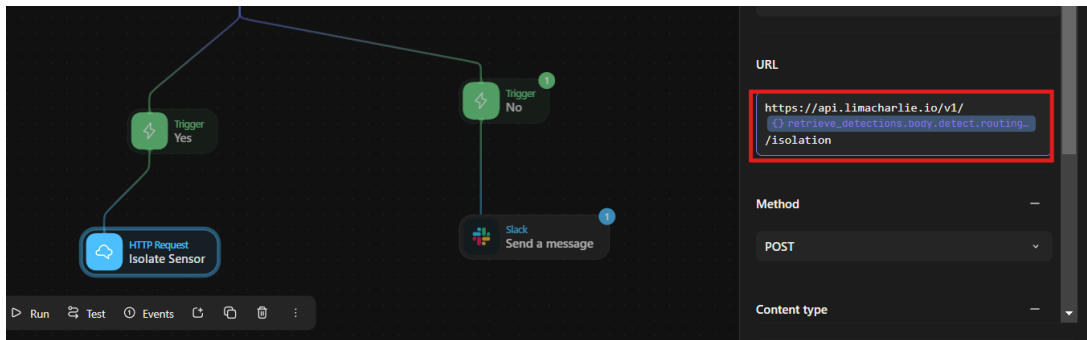


- Add Lima Charlie Action and connect it to Trigger “Yes” and select “Isolate Sensor” Template.

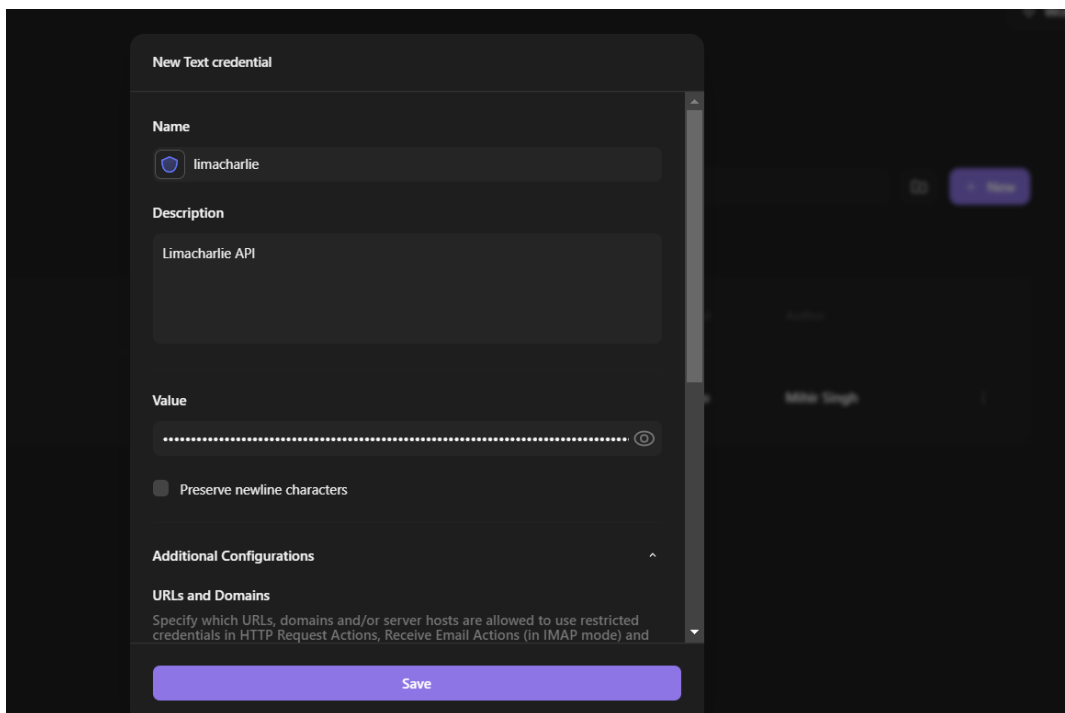


2. Add Isolation Command:

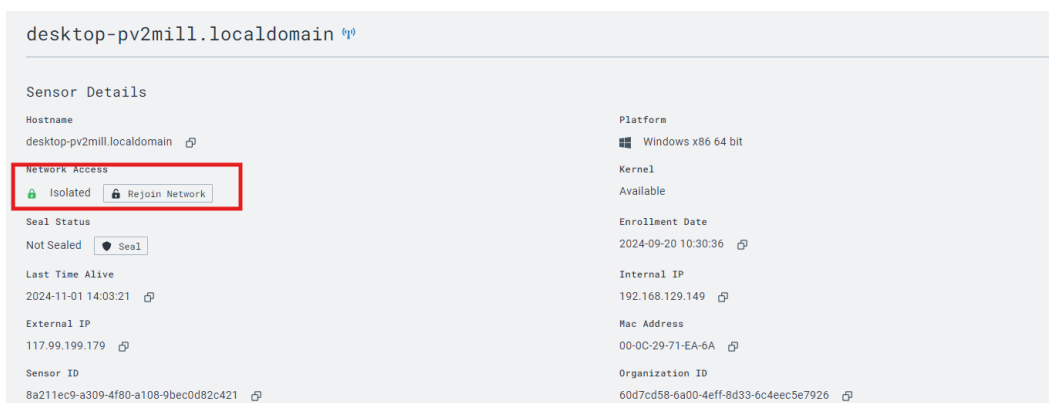
- Use the **LimaCharlie action** in Tines to send an isolation command to the detected machine.
- Use the **Sensor ID** to specify the target machine.



- Add LimaCharlie as a credential using its API

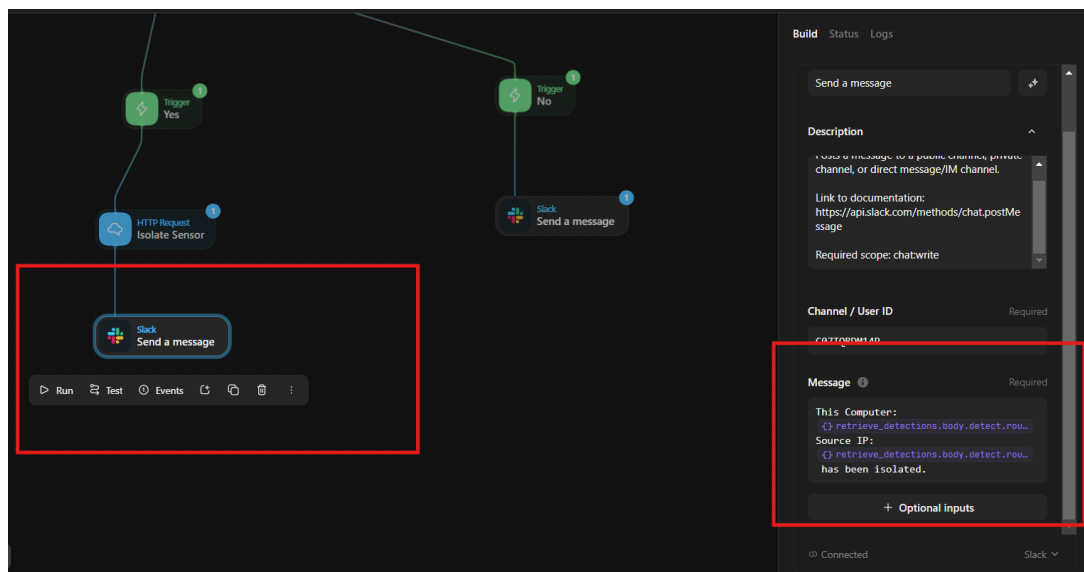


- Confirm with a test that the machine is isolated successfully.

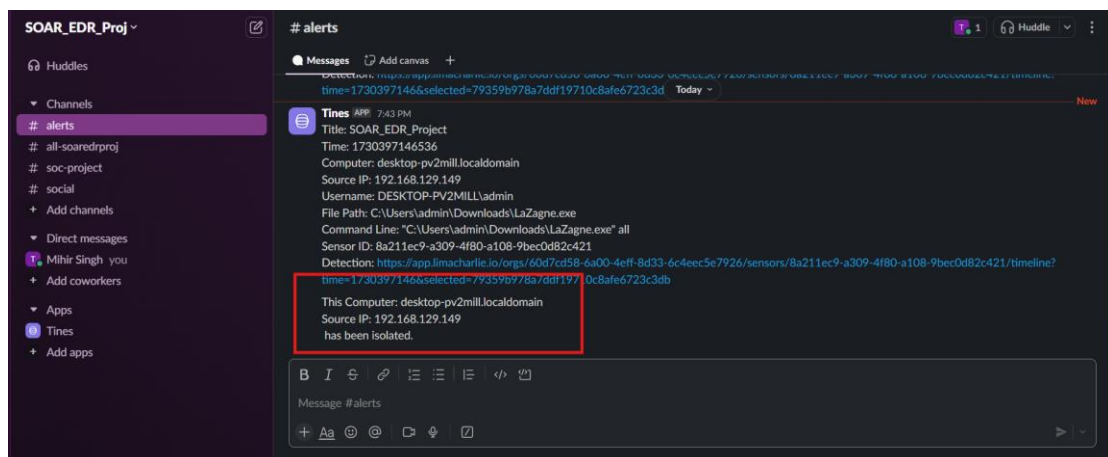


2. Send Isolation Status to Slack:

- Once isolation is complete, send a Slack message confirming the machine's isolation status.



- Now test the slack message to check the final test.



With this the SOAR-EDR Automation project is completed.

Final Tines Workflow

