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Introduction to Defending the Enterprise using Automated Security Operations

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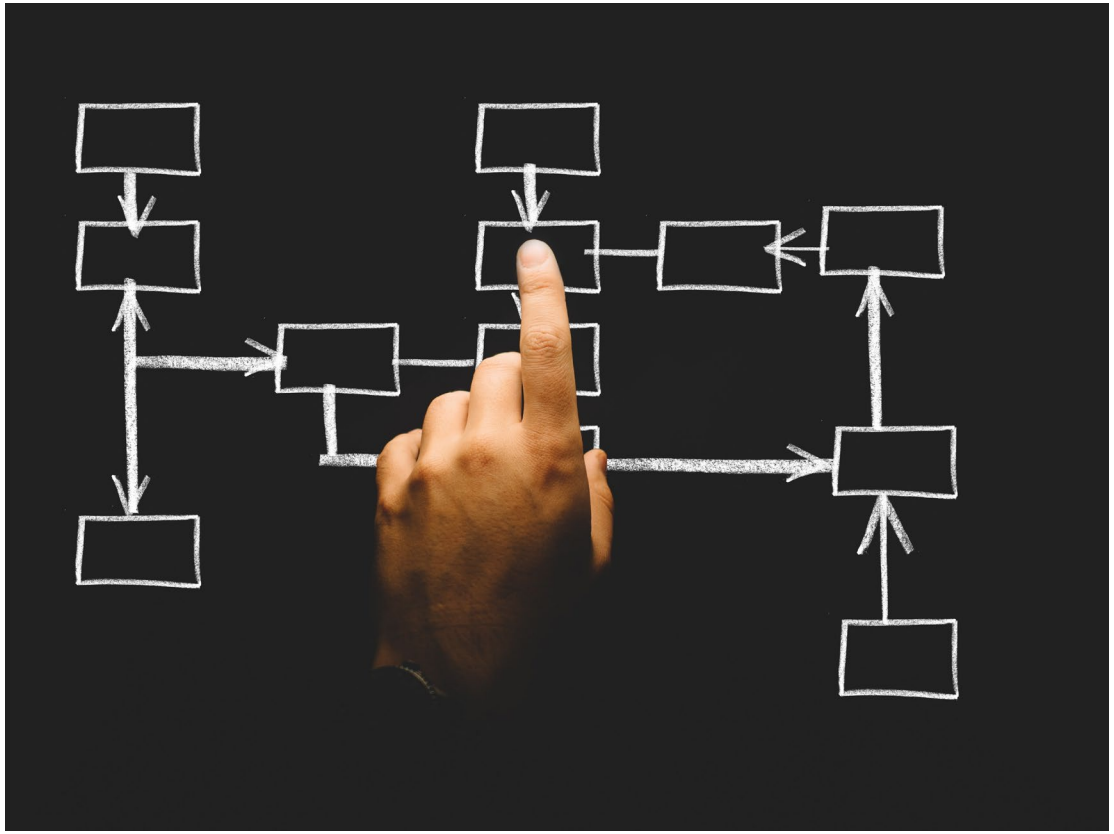
Automation: What is it?

What is Security Orchestration, Automation and Response(SOAR)?

- SOAR is the integration of disparate security platforms to complete workloads leveraging various levels of human interaction.



Why is Automation Important?

- 62% of Organizations report Security Challenges related to the Lack of skilled staff (SANS 2018 SOC Report)
  - Addressing the skills gap with automation allows organizations to improve their security posture by improving the efficiency of resources already present

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“Automation Is Easy”

-Nobody

What are security teams saying about automation?

- 50% of Organizations Report Challenges related to Lack of automation and orchestration (Second only to the hiring of skilled staff) (SANS 2018 SOC Report)
- Only 18% of organizations feel they have implemented an effective Security Automation Strategy (SANS 2018 SOC Report)

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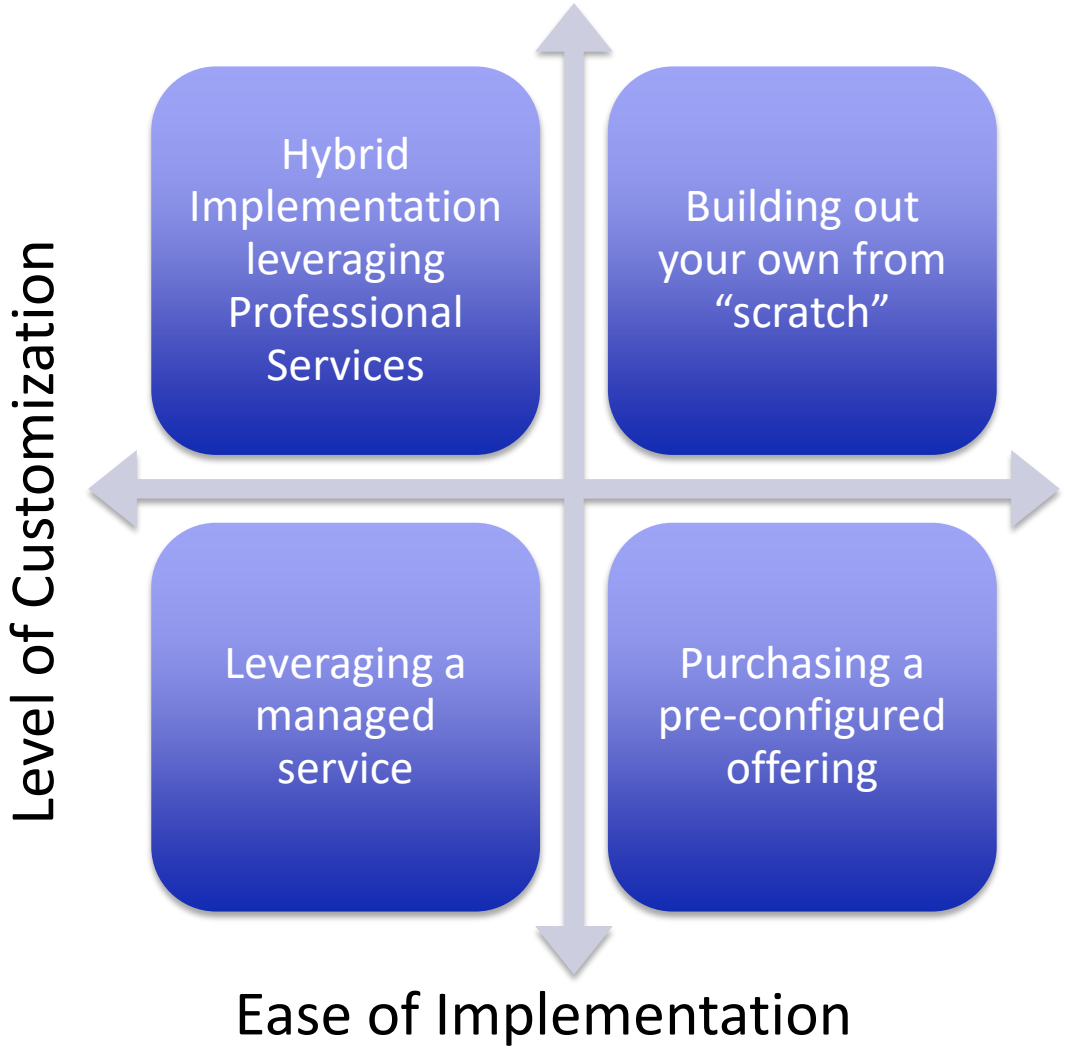
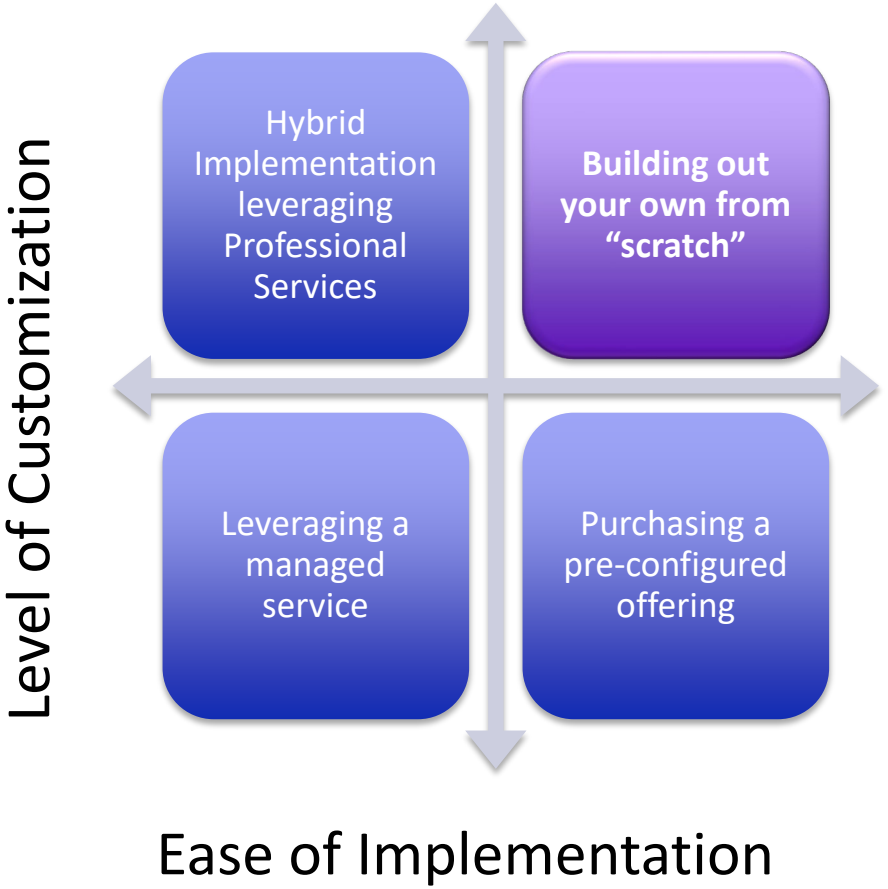
Automation: Where do I Start?

The Four Paths to Automated Security Operations



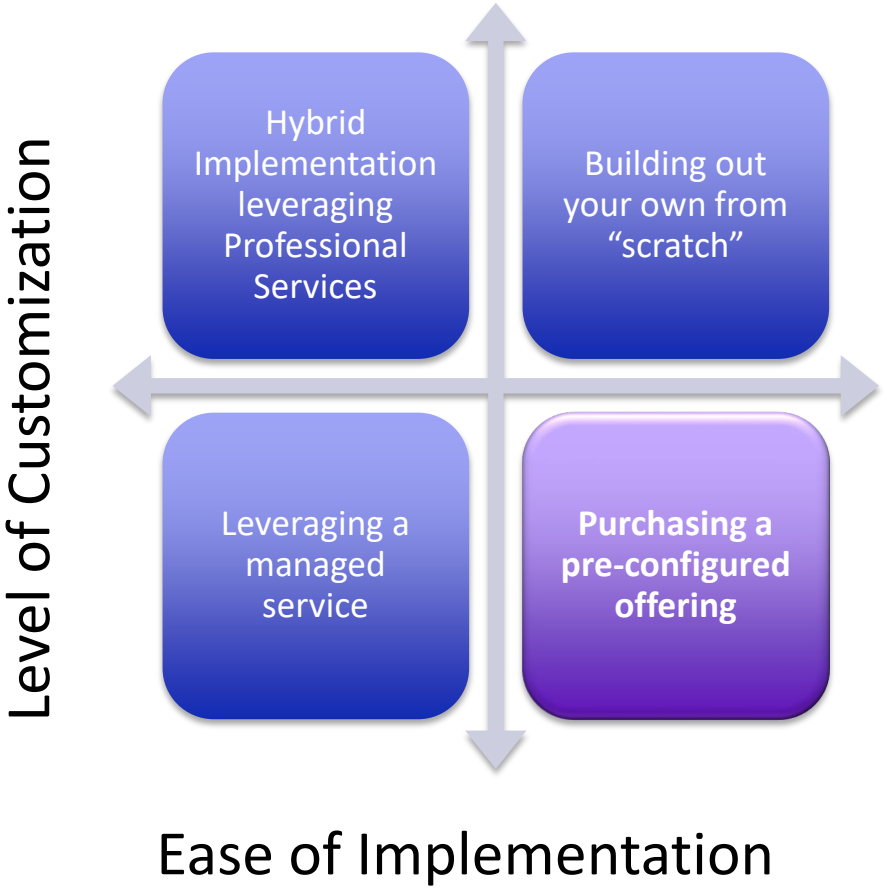
Building Out Your Own From “Scratch”

- Pros:
  - Full Customization
  - No Functional or External Limitations
- Cons:
  - High Cost to Effectively Implement (Time/Resources)
  - Must Self-Correct for any updates and changes to any external platforms
  - Significant Ongoing Maintenance



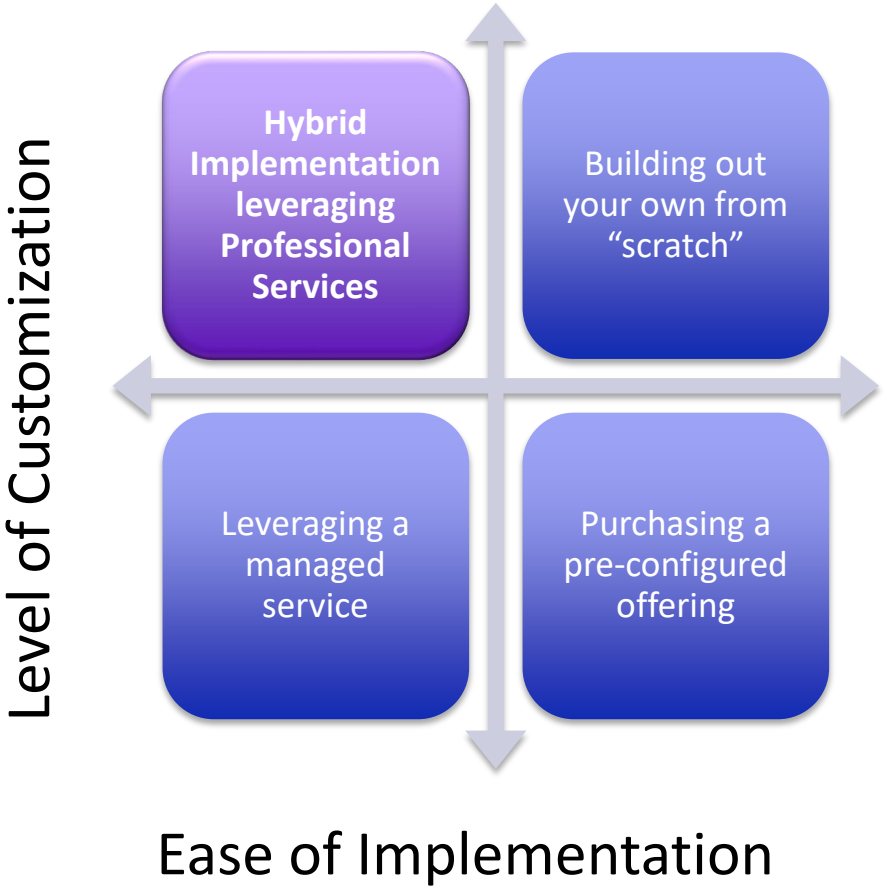
Purchasing a Pre-Configured Offering

- Pros:
  - Provides a great base to build on
  - Frees up time to implement automations and integrate tools
- Cons:
  - Functionality Partially Dependent on Vendor



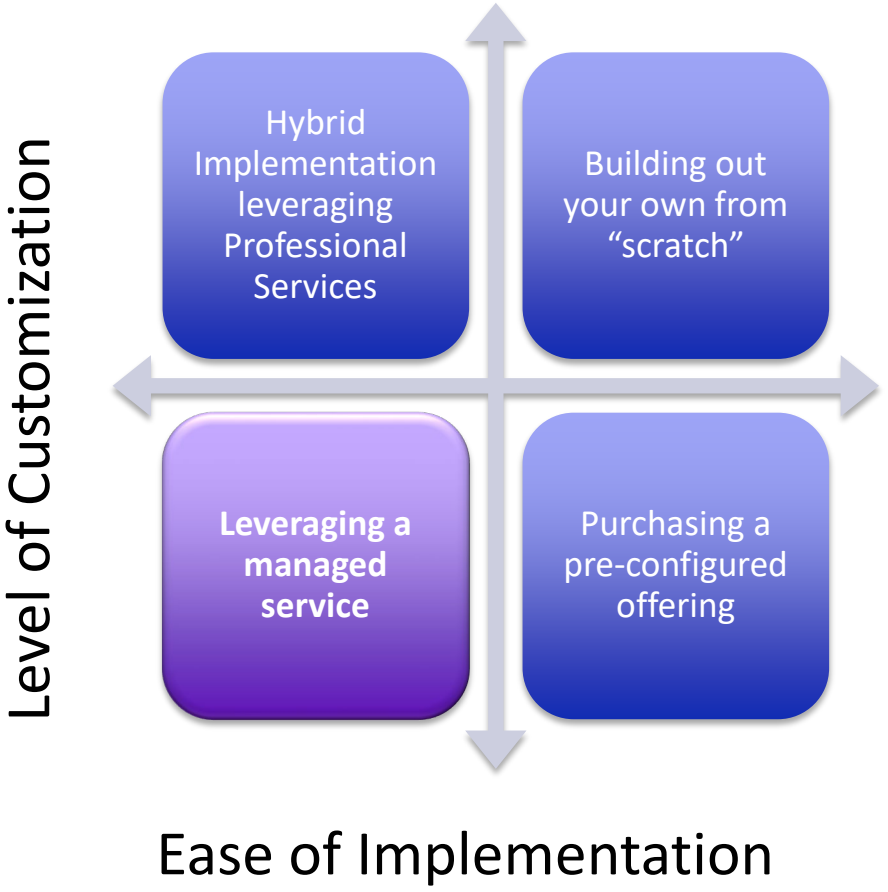
Hybrid Development Leveraging Professional Services

- Pros:
  - Flexibility to Implement Custom Configurations with ease
  - Gain Insight and Validation from Third Party
- Cons:
  - External Development Resource is potentially shared and may limit speed of implementation



Leveraging a Managed Service

- Pros:
  - Near-Instant Return On Investment (Post-Implementation)
- Cons:
  - Can be Very Costly
  - Potentially Limited Scope of Service
  - Vendor Lock-In



How Do I choose the right path?

- Cost Considerations
  - Resources
    - *Financial*
    - *Personnel*
- Organizational Knowledge
  - “Does your organization have people who truly ‘know’ what to do?”
    - *Extensive operational experience*
    - *Comprehensive existing workflows/playbooks*
- Enterprise Resources
  - “Is there any resistance to automating certain actions (such as blocking IP’s or domains automatically)?”
  - “Does your security team have access to (or have the buy-in of IT) to implement the automations you are looking to do?”
  - “Do your platforms support the pace of automation planned?”

I've settled on a path, now what?

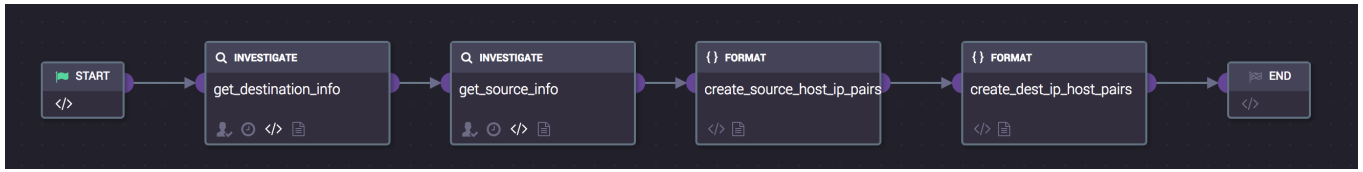
- With all paths:
  - Ensuring there is an understanding regarding the following:
    - *Expected Deliverables*
    - *SLA's/SLO's*
    - *Continuous Improvement Plan*
- If leveraging a managed service or purchasing a preconfigured offering:
  - Balancing Expectations Vs. Realities
    - *You are not the only client…*
      - *…however, you can leverage the collective knowledge gained by others*
- If Building Your own or Leveraging External Contractors
  - Defining your automation goals and benchmarks
  - Determining what is in-scope and out-of-scope
    - *Do I implement an automated block or do I automate a notification to an engineer for validation?*

Where Not to begin your Automation Journey

- Buy a product/solution without an implementation plan
  - Avoid buying “shelfware”
    - Review existing documented processes
    - Validate organizational knowledge of existing platforms
    - Define # of FTE available for automation management
- Trying to automate everything on day one
  - Prioritize your automations using the following criteria:
    - Is there buy-in for the workflow?
    - Is the workflow repeatable?
    - Is there an API or script?
    - Is it Time-Consuming?

Tactical Orchestration vs Strategic Automation

- Tactical Orchestration
  - Individual Tasks or Workflows
    - Implementation of Security Exceptions



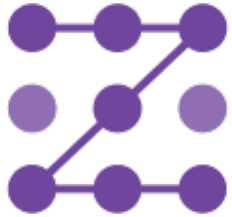
- Strategic Automation
  - Combination of Orchestrations to complete a Full Security Response
    - End To End Incident Response Playbook

How can I measure my organizations Automation Effectiveness?

- **Level One**
  - Manual Processing

- **Level Two**
  - Limited Orchestration
  - No Automation

- **Level Three**
  - Significant Orchestration
  - Some Automation



- **Level Four**
  - Full Orchestration
  - Significant Automation

- **Level Five**
  - End to End SOAR Implementation

How To Calculate ROI

- Document the steps to your workflow
- Determine the time needed to manually complete every step
- Use a normalized salary to calculate cost/minute (keep note that no downtime is factored into the calculation)
- Document the time needed to complete the action using automation
- Compare the time and cost between manual and automated processing

Automation Return on Investment

- April-December 2017
  - Addressing the Basics
    - 50-100 Automated Events/Day
    - $75k ROI
    - 5 Active Playbooks
- End of 2018
  - Enhancing the Lineup
    - 1,000 Automated Events/Day
    - $500k ROI
    - 17 Active Playbooks
- End of 2019
  - Closing the Loop
    - ~25,000 Automated Events/Day
    - $10M ROI
    - 25 Active Playbooks

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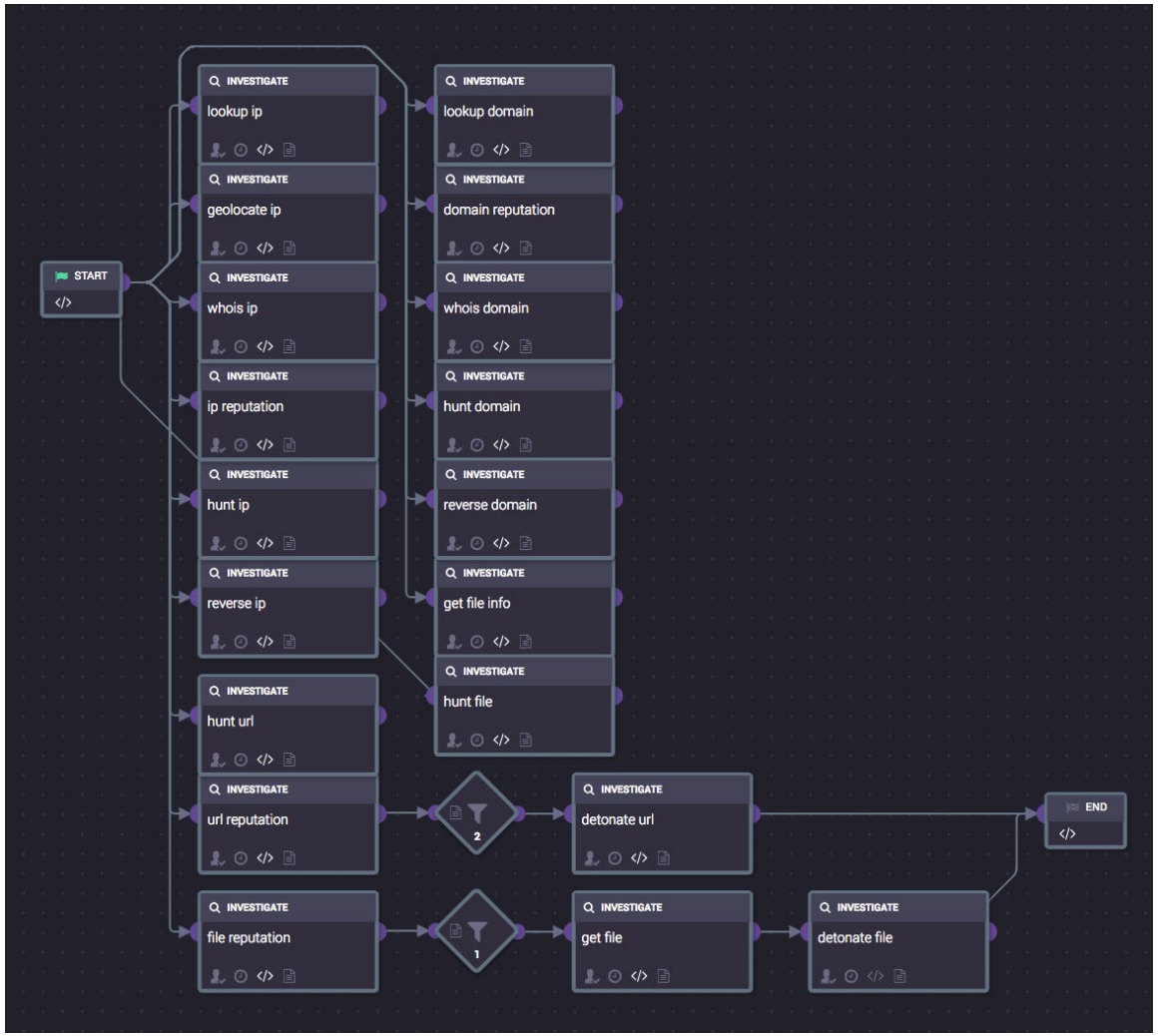
Automation: What Can I Do?

What are some things I can automate?

- Basic Automated Phishing Analysis
  - Gathering Submissions
  - Conducting Analysis
  - Implementing desired actions based on findings
- Automated Alert Analysis and Remediation
  - Forwarding alerts to automation platforms
  - Conducting an Investigation
  - Establishing a remediation plan
- Temporary Security Exception Management
  - Manual or Automated Input
    - *Examples:*
      - *Temporary Network Access*
      - *Temporary Escalated Permissions*
  - Orchestrated Implementation
  - Effective Reporting



How can I get this done in my organization?

- Next 30 Days
  - Identify opportunities for automation within your organization
  - Verify buy-in from potentially involved or impacted groups
- Before Next Budget Cycle
  - Develop an implementation plan suitable to your operation
  - Validate your capex/opex costs to limit possible delays
- During The Implementation
  - Ensure that resources are available to complete the process
  - Document contingency plans should an automation stop functioning

Key Takeaways

- Ensure that your financial and organizational resources are sufficient to move forward with a chosen path.
- Establish a Security Automation strategy before acquiring and/or implementing a solution.
- Maintain implementation guidelines and continuous improvement benchmarks that are clear and appropriate.

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Thank You

Resources

- SANS 2018 SOC Report
- Gartner SOAR Innovation Insight 2017

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“Apply” Slide

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