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Introduction to Defending the Enterprise using Automated Security Operations

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- ▶ Worked in Government, Education, and Enterprise
- ▶ Background in Government Network Securities and Management

Automation: What is it?



What is Security Automation and Orchestration (SAO)?

- ▶ SAO is the integration of disparate security platforms to complete workloads using limited human interaction

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Why is Automation Important?

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

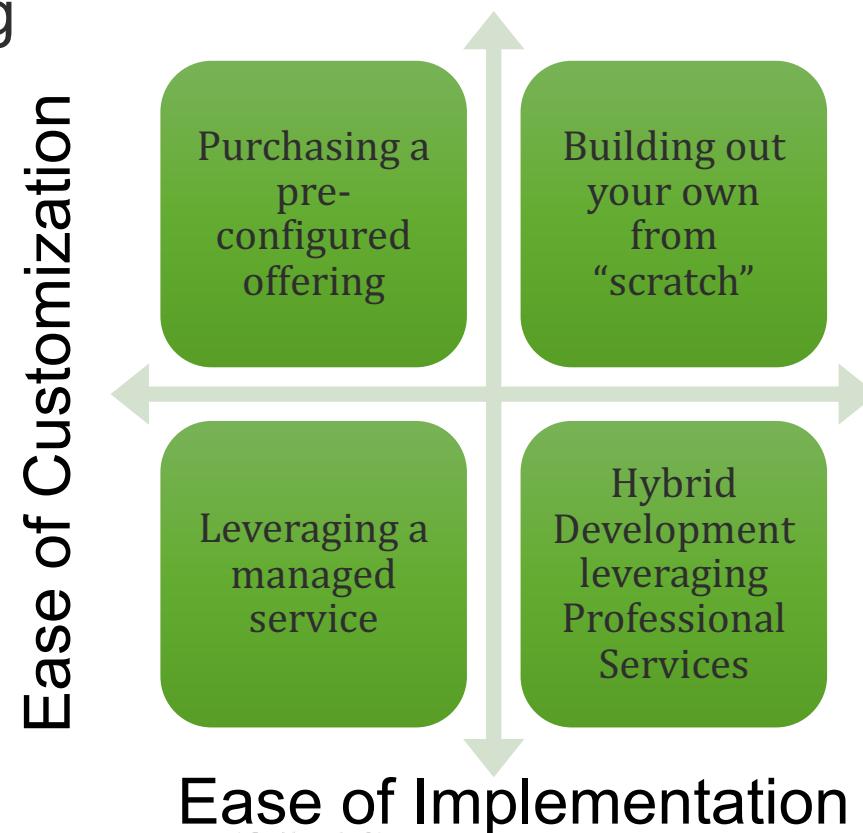
Is Automation Easy?

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

Automation: Where do I Start?

The Four Paths to Automated Security Operations

- ▶ Building out your own from “scratch”
- ▶ Hybrid Development leveraging Professional Services
- ▶ Purchasing a pre-configured offering
- ▶ Leveraging a managed service



How Do I choose the Right Path?

► Cost Considerations

- Resources
 - *Financial*
 - *Personnel*

► Organizational Knowledge

- Does your organization have people that 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?

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 the workflow repeatable?
 - Is there an API or script?
 - Is it Time-Consuming?

Tactical VS Strategic Automation

- ▶ **Tactical Automation**
 - Individual Tasks or Workflows
 - ▶ **Strategic Automation**
 - Combination of multiple automated workflows

How Can I Measure my Organizations Automation Effectiveness?

- ▶ Level One - No Automation
 - ▶ Level Two - Limited Tactical Automation/No Strategic
 - ▶ Level Three - Significant Tactical/Limited Strategic
 - ▶ Level Four - Full Tactical/Partial Strategic
 - ▶ Level Five - Full Tactical and Strategic Automation

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 Orchestration and Management

- Manual or Automated Input
 - Examples:
 - *Temporary Network Access*
 - *Temporary Firewall Opening for Controlled Environments*
- Orchestrated Implementation
- Effective Reporting

Resources

- ▶ SANS 2018 SOC Report
 - ▶ Gartner SOAR Innovation Insight 2017

Thank You

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