Incident Response Playbooks

A New Open Source Resource

Bio

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Sr Manager Incident Response at Syntax

Core Mentor @BlueTeamVillage

Threat Hunting
Adversary Detection

Talks at : Derbycon, BTV, NorthSec, SecTor & BSides

@ScoubiMtl

Agenda

Background
Current Playbooks
Our Hybrid Format
Our Current Playbooks
How to Contribute

Background

New Position at Syntax

They Wanted Someone to Own IR

Hired July 2020

Asked Questions

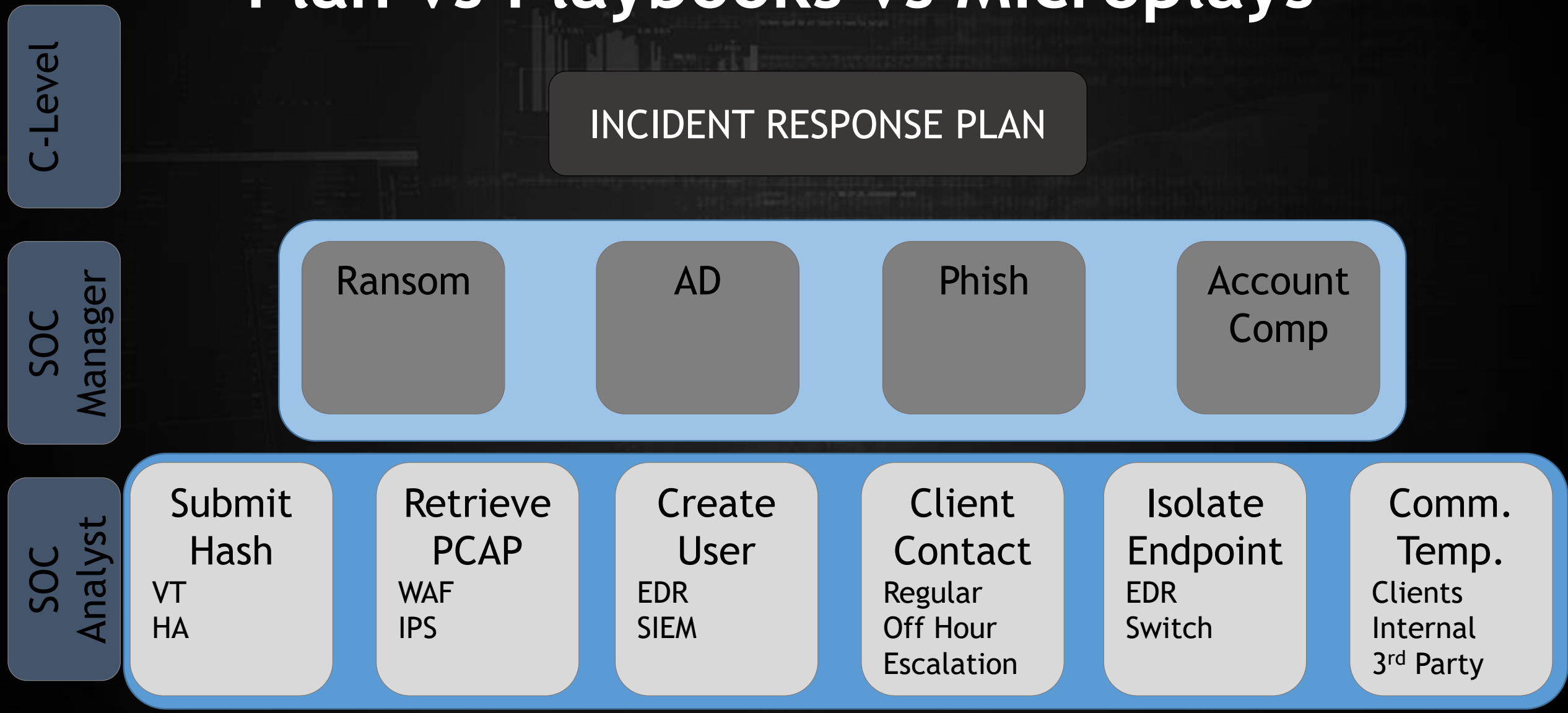
- SOC
- Management
- Higher Manager

IR Plan

IR Playbooks

Microplays / WI

Plan vs Playbooks vs Microplays



Current Playbooks

IRM

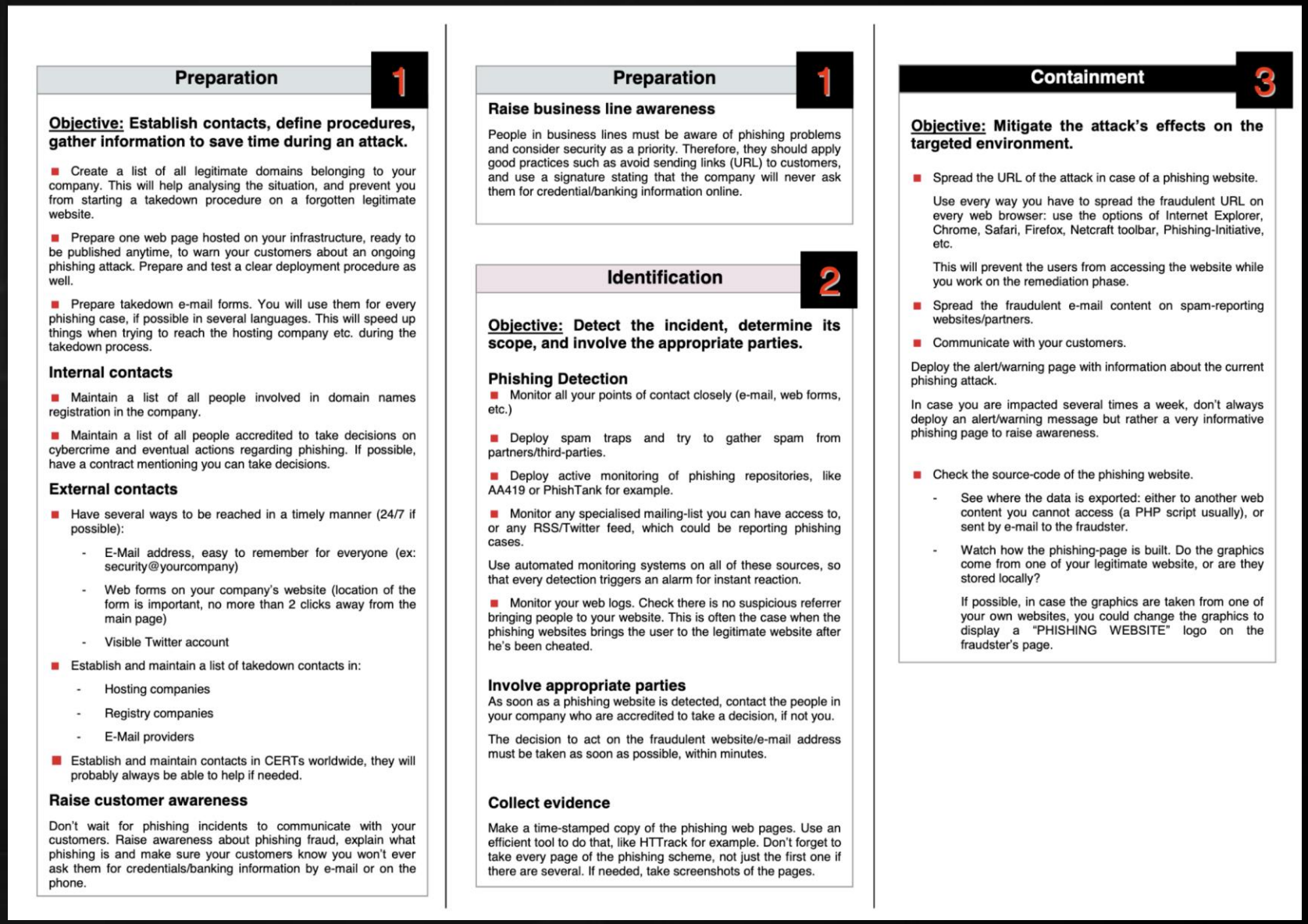
Société Générale

PDF

Windows Centric

More Procedure

No Edits in 5 Years



Preparation 1

Objective: Establish contacts, define procedures, gather information to save time during an attack.

- Create a list of all legitimate domains belonging to your company. This will help analysing the situation, and prevent you from starting a takedown procedure on a forgotten legitimate website.
- Prepare one web page hosted on your infrastructure, ready to be published anytime, to warn your customers about an ongoing phishing attack. Prepare and test a clear deployment procedure as well.
- Prepare takedown e-mail forms. You will use them for every phishing case, if possible in several languages. This will speed up things when trying to reach the hosting company etc. during the takedown process.

Internal contacts

- Maintain a list of all people involved in domain names registration in the company.
- Maintain a list of all people accredited to take decisions on cybercrime and eventual actions regarding phishing. If possible, have a contract mentioning you can take decisions.

External contacts

- Have several ways to be reached in a timely manner (24/7 if possible):
  - E-Mail address, easy to remember for everyone (ex: security@yourcompany)
  - Web forms on your company's website (location of the form is important, no more than 2 clicks away from the main page)
  - Visible Twitter account
- Establish and maintain a list of takedown contacts in:
  - Hosting companies
  - Registry companies
  - E-Mail providers
- Establish and maintain contacts in CERTs worldwide, they will probably always be able to help if needed.

Raise customer awareness

Don't wait for phishing incidents to communicate with your customers. Raise awareness about phishing fraud, explain what phishing is and make sure your customers know you won't ever ask them for credentials/banking information by e-mail or on the phone.

Preparation 1

Raise business line awareness

People in business lines must be aware of phishing problems and consider security as a priority. Therefore, they should apply good practices such as avoid sending links (URL) to customers, and use a signature stating that the company will never ask them for credential/banking information online.

Identification 2

Objective: Detect the incident, determine its scope, and involve the appropriate parties.

Phishing Detection

- Monitor all your points of contact closely (e-mail, web forms, etc.)
- Deploy spam traps and try to gather spam from partners/third-parties.
- Deploy active monitoring of phishing repositories, like AA419 or PhishTank for example.
- Monitor any specialised mailing-list you can have access to, or any RSS/Twitter feed, which could be reporting phishing cases.

Use automated monitoring systems on all of these sources, so that every detection triggers an alarm for instant reaction.

- Monitor your web logs. Check there is no suspicious referrer bringing people to your website. This is often the case when the phishing websites brings the user to the legitimate website after he's been cheated.

Involve appropriate parties

As soon as a phishing website is detected, contact the people in your company who are accredited to take a decision, if not you.

The decision to act on the fraudulent website/e-mail address must be taken as soon as possible, within minutes.

Collect evidence

Make a time-stamped copy of the phishing web pages. Use an efficient tool to do that, like HTTrack for example. Don't forget to take every page of the phishing scheme, not just the first one if there are several. If needed, take screenshots of the pages.

Containment 3

Objective: Mitigate the attack's effects on the targeted environment.

- Spread the URL of the attack in case of a phishing website.

  Use every way you have to spread the fraudulent URL on every web browser: use the options of Internet Explorer, Chrome, Safari, Firefox, Netcraft toolbar, Phishing-Initiative, etc.

  This will prevent the users from accessing the website while you work on the remediation phase.
- Spread the fraudulent e-mail content on spam-reporting websites/partners.
- Communicate with your customers.

Deploy the alert/warning page with information about the current phishing attack.

In case you are impacted several times a week, don't always deploy an alert/warning message but rather a very informative phishing page to raise awareness.

- Check the source-code of the phishing website.
  - See where the data is exported: either to another web content you cannot access (a PHP script usually), or sent by e-mail to the fraudster.
  - Watch how the phishing-page is built. Do the graphics come from one of your legitimate website, or are they stored locally?

    If possible, in case the graphics are taken from one of your own websites, you could change the graphics to display a "PHISHING WEBSITE" logo on the fraudster's page.

Gov.scot

Scottish Governement

PDF

Reviewed in 2020

Overlap

Workflow in the Annex

4. Analyse

Analysis Phase		
Phase objectives	The analysis phase has the following key objectives: • Analyse the cyber incident to uncover the scope of the attack; • Identify and report potentially compromised data and the impact of such a compromise; • Establish the requirement for a full forensic investigation; • Develop a remediation plan based upon the scope and details of the cyber incident.	
Activity	**Description**	**Stakeholders**
Analyse the extent of the incident	Activities may include, but are not limited to:	
	Engage technical staff from resolver groups.	• Information Security Manager • Core IT CIRT • CIRT
	Identify and research whether; • Personal data is at risk (internal or external to the organisation); • Other SENSITIVE data is at risk, if so use the Data Loss Play-Book; • Public or personal safety is affected; • Services are affected and what they are; • You are able to control / record and measure critical systems; • There is any evidence of who is behind the attack; • There is internal knowledge behind the incident; • The act could be exploited by criminals.	• Information Security Manager • Core IT CIRT • CIRT • Resilience Lead • Business Continuity Lead • Police Area Lead
	Determine patch methods.	• Information Security Manager • Core IT CIRT

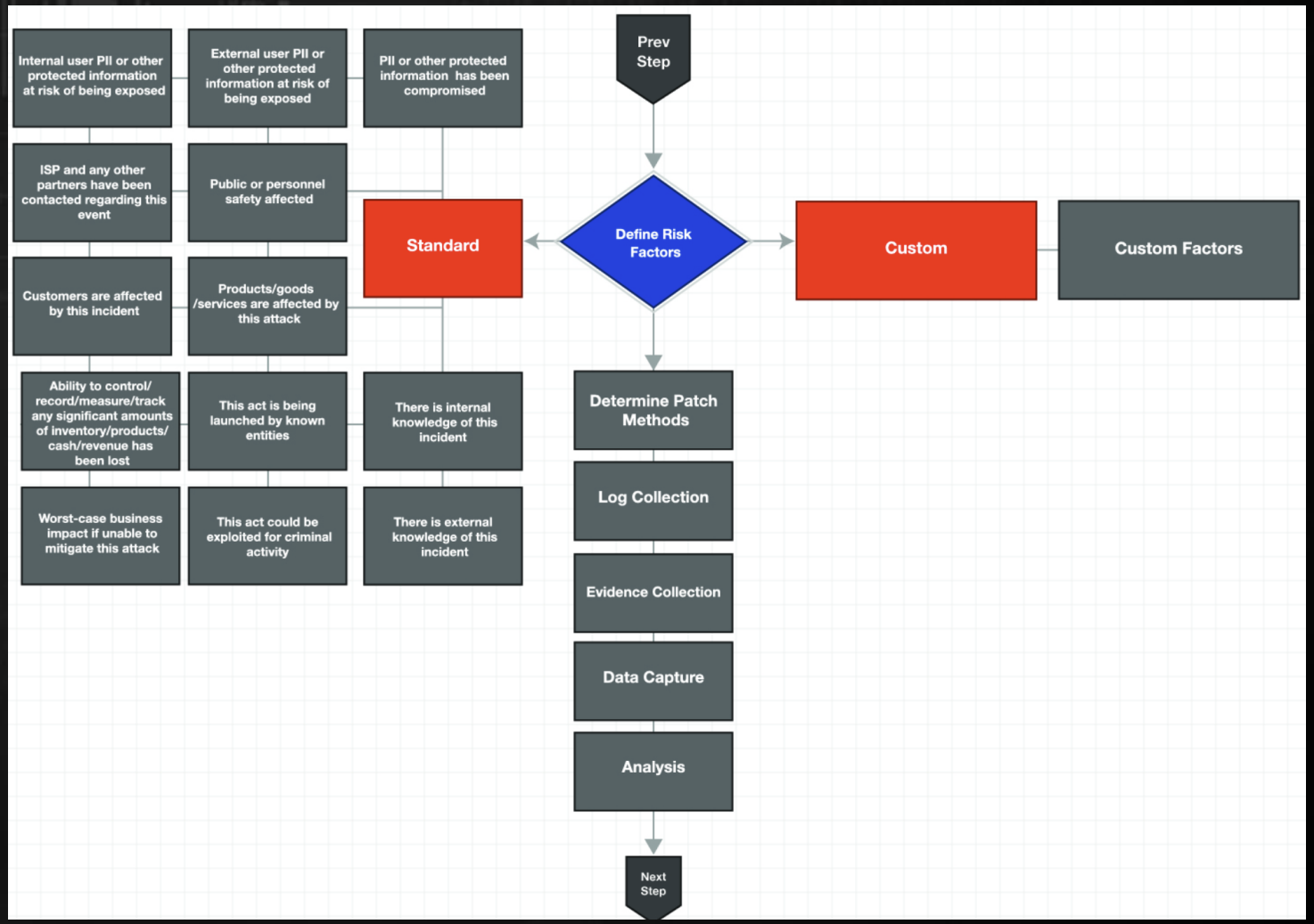
Incidentresponse .com

Consortium PDF & Visio

9 Playbooks

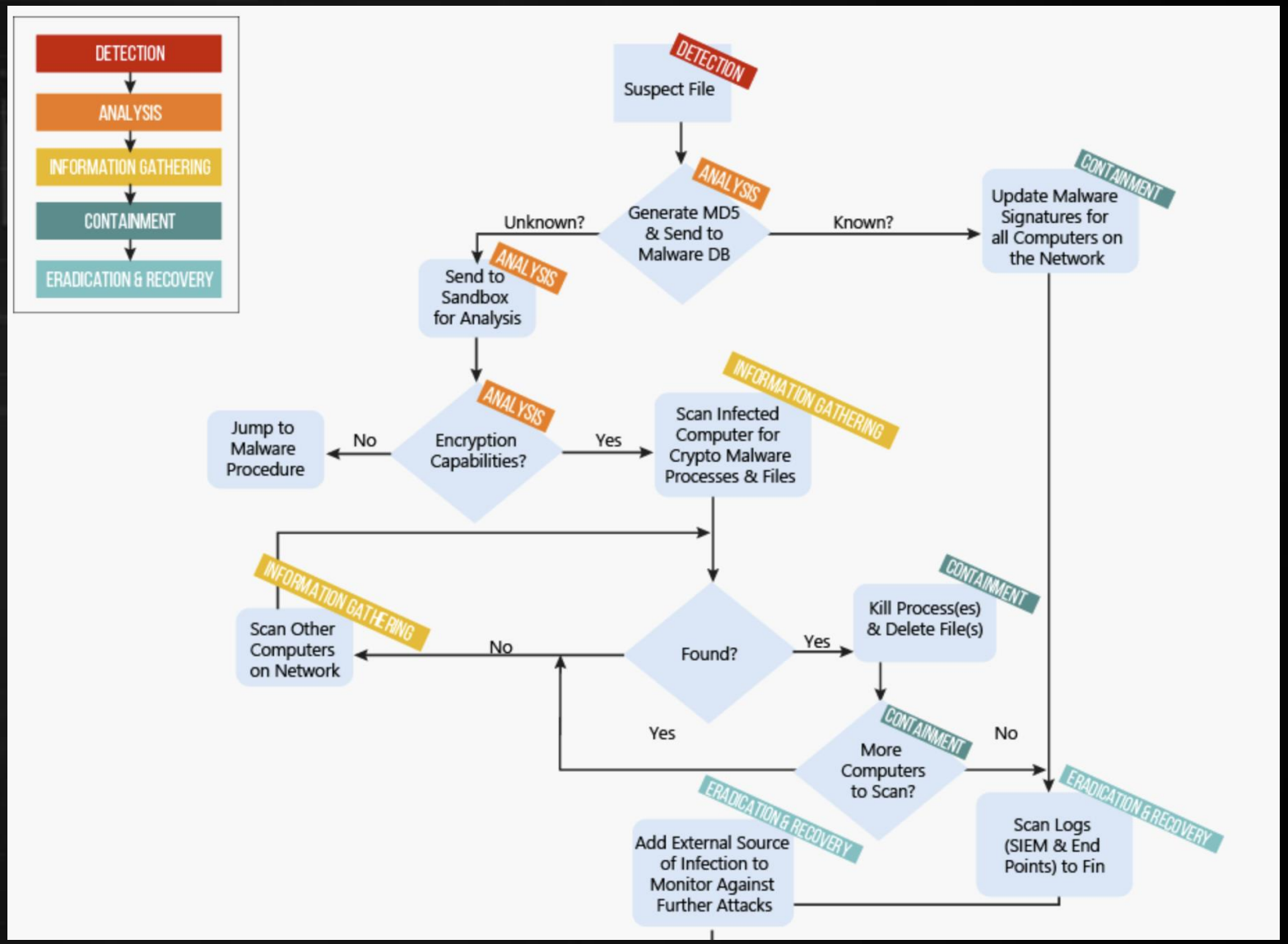
All very similar

Flow chart



Ayehu.com

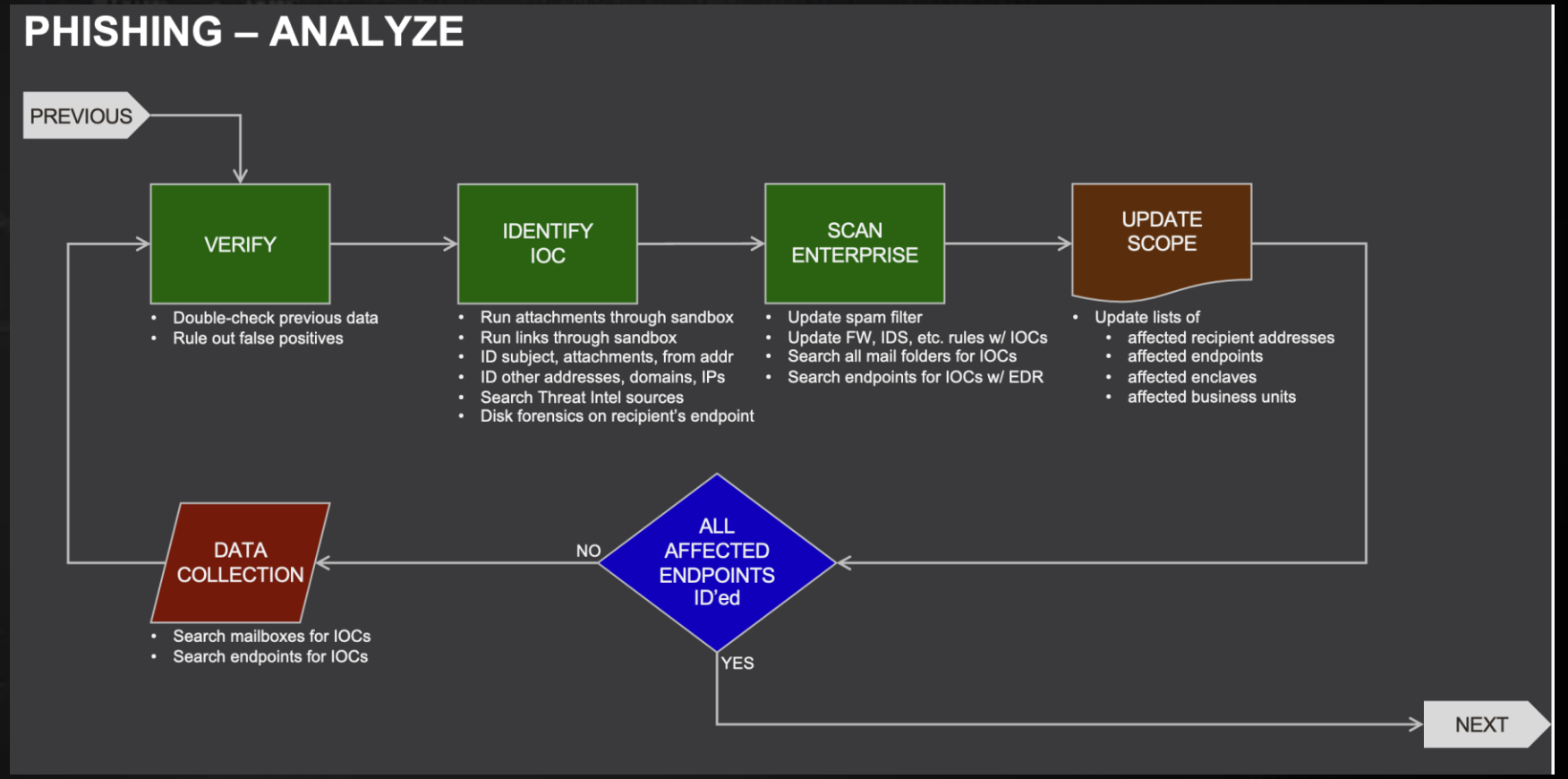
Part of Resolve (?)
Images
Limited Sample
High Level
Flow chart



Taksati

Chris Taylor

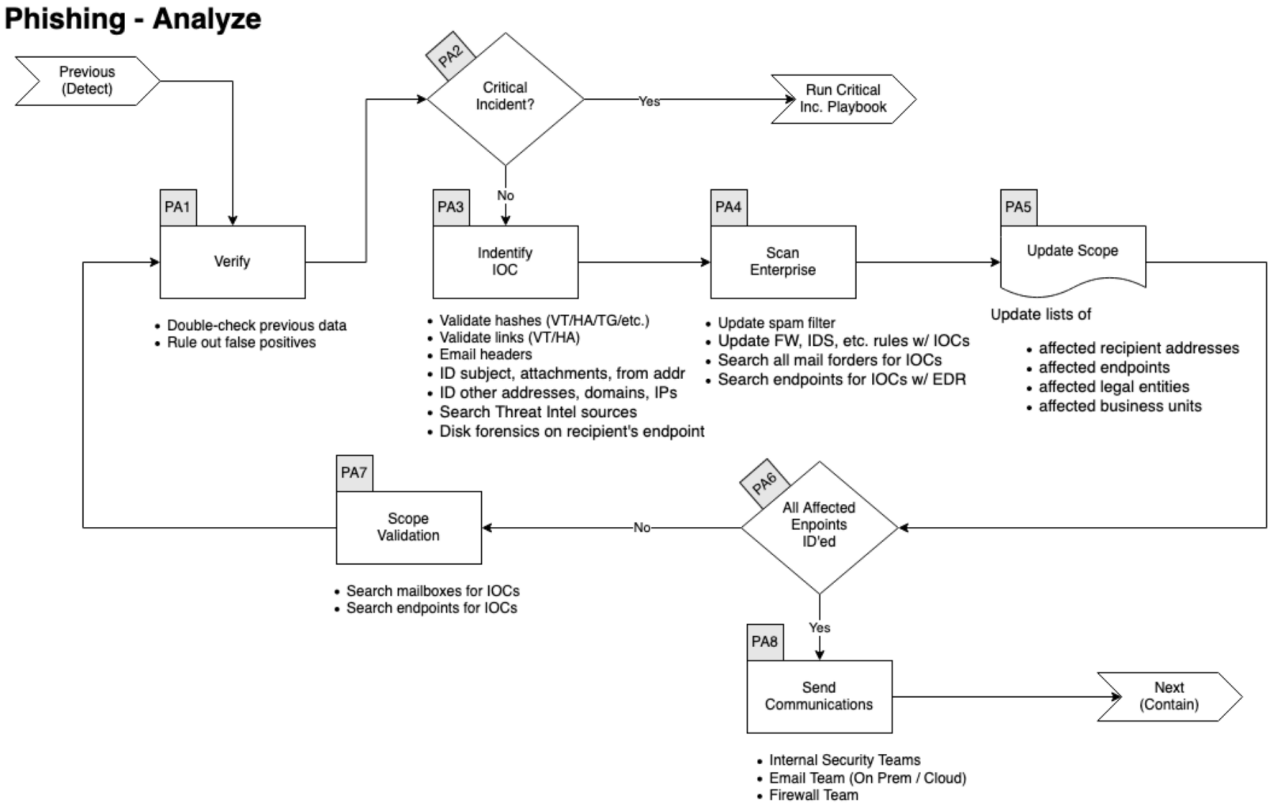
PowerPoint
Visio / Draw.io
Workflow with details
Perfect level



But there’s Only One

Syntax Playbooks

Git
Markdown / Draw.io
Open & Free
Easy to modify



Verify

▼ Expand/Colapse
In conjonction with a senior member of the ISOC

- Double check previous datsa
- Rule out False Positive

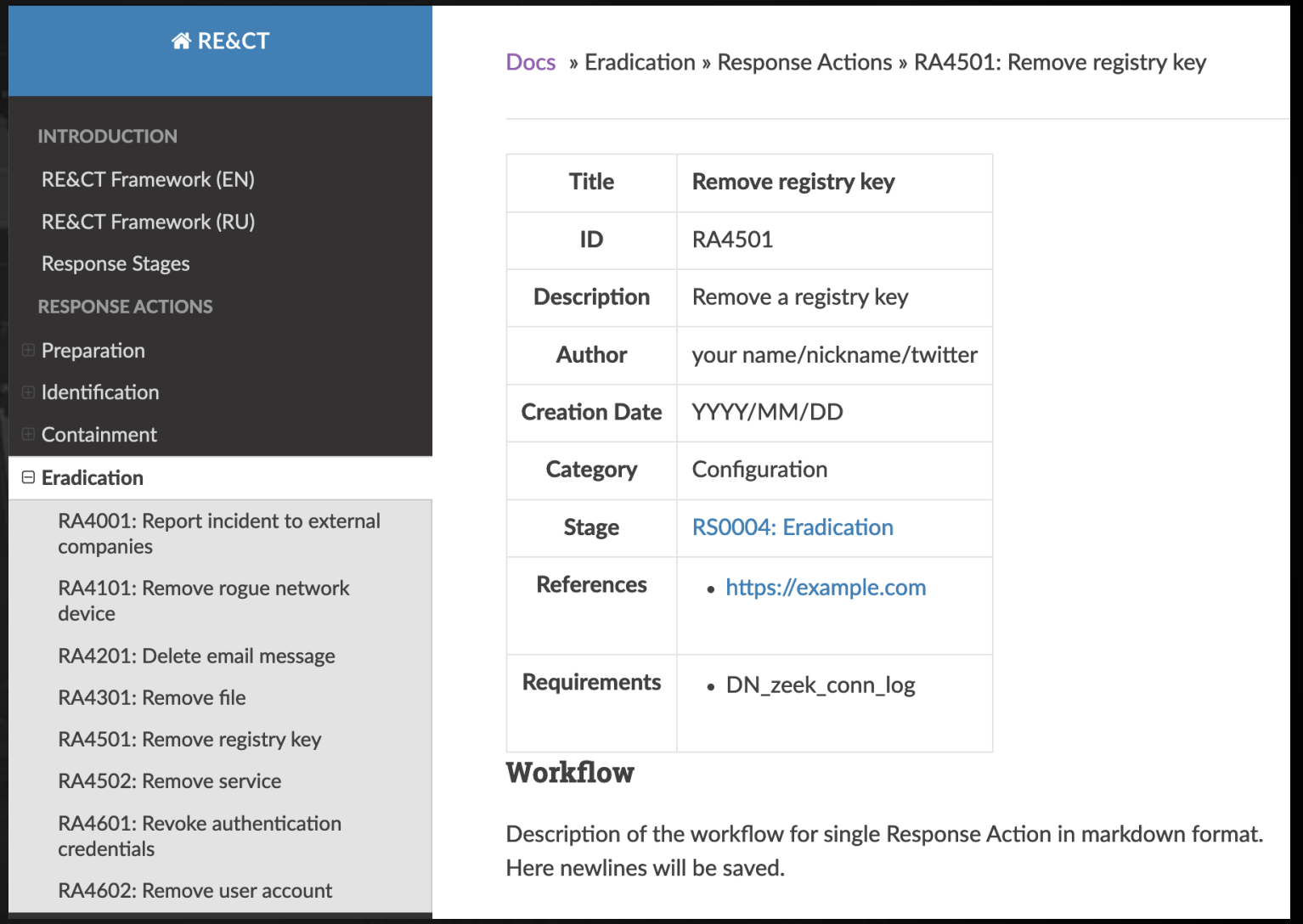
Identify IOCs

▼ Expand/Colapse

- Validate hashes
  - VirusTotal
  - Hybrid Analysis
- Validate links
  - VirusTotal
  - Hybrid Analysis
  - URLScan

RE&CT

@atc_project
Modular
Open Source
Framework
Lack real content



Austin Songer

github.com/austinsonger/Incident-Playbook

Playbook for every MITRE Technique

Exercise Scenarios that can be used for training purposes

Credential Access	T1110	Brute Force	Password Spraying	IaaS, Linux, Office 365, SaaS, Windows, macOS	User

```
(P) Preparation

1. Patch asset vulnerabilities
2. Perform routine inspections of controls/weapons
3. Ensure that workstations and servers are loggingto a central location
4. Verify that authentication attempts to systems andapplications are being logged
5. Set up network segmentation and firewalls to limitaccess to systems and services
6. Make use of multi-factor authentication
7. Establish and enforce a secure password policy
```

Assign steps to individuals or teams to work concurrently, when possible; this playbook is not purely sequential. Use your best judgment.

Investigate

`TODO: Expand investigation steps, including key questions and strategies, for <Type of Incident>.`

1. Monitor for:
    a. Failed login attempts for default and common account names
    b. Failed login attempts for the same account across multiple systems
    c. Failed login attempts to multiple systems from the same source
2. Investigate and clear ALL alerts associated with the impacted assets

Demo Time!

gitlab.com/syntax-ir/playbooks/

Create a new Playbook

Folder & Files

To create a new Playbook:

- Create a new folder ex: `IRP-DDoS`
- Create a file called `README.md` inside your new folder
- Paste the content of `IRP-TEMPLATE.md`
- Replace the string `-NAME-` for your playbook name ex: `DDoS` in all the document
- Edit the sections.

Workflows

To create the Workflows

- Inside your new folder create a folder called `Workflows`
- Open the file `WORKFLOW-TEMPLATE.drawio` in Draw.io
- Save locally until you have completed all the tabs
- Once all the tabs/pahses are completed, upload a copy to your new `Workflows` folder
- Use the `File -> Export as -> PNG` function of Draw.io to save each diagram phase separatly
  - Make sure you Unchecked `Include a copy of the diagram`
  - Click `Export`
  - Save locally
- Upload each .PNG file to your new `Workflows` folder

Sub Folders

Products

This folder contains information about the various “commercial” products we use during an incident.

Tools

This folder contains information about the various free/online tools we use during an incident.

How To Contribute

Clone/Fork the Repo

Add, Modify Contents

- Use Templates

Submit PR

Build Pipelines

- CI/CD
- Draw.io automation

Become a Maintainer

Stronger Together

Thank You!

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