CACAO Introduction - HotRFC

IETF 104 Prague

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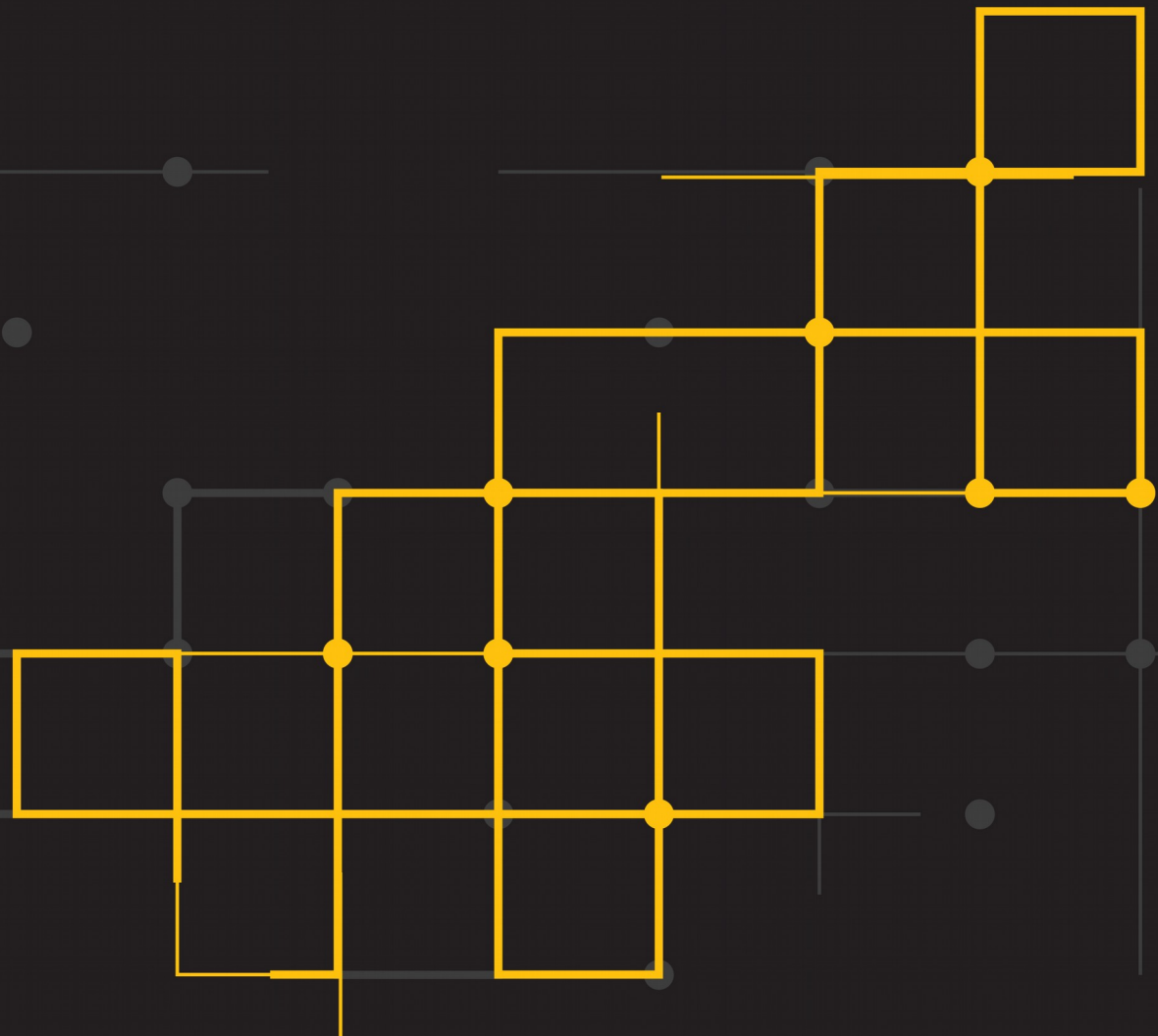


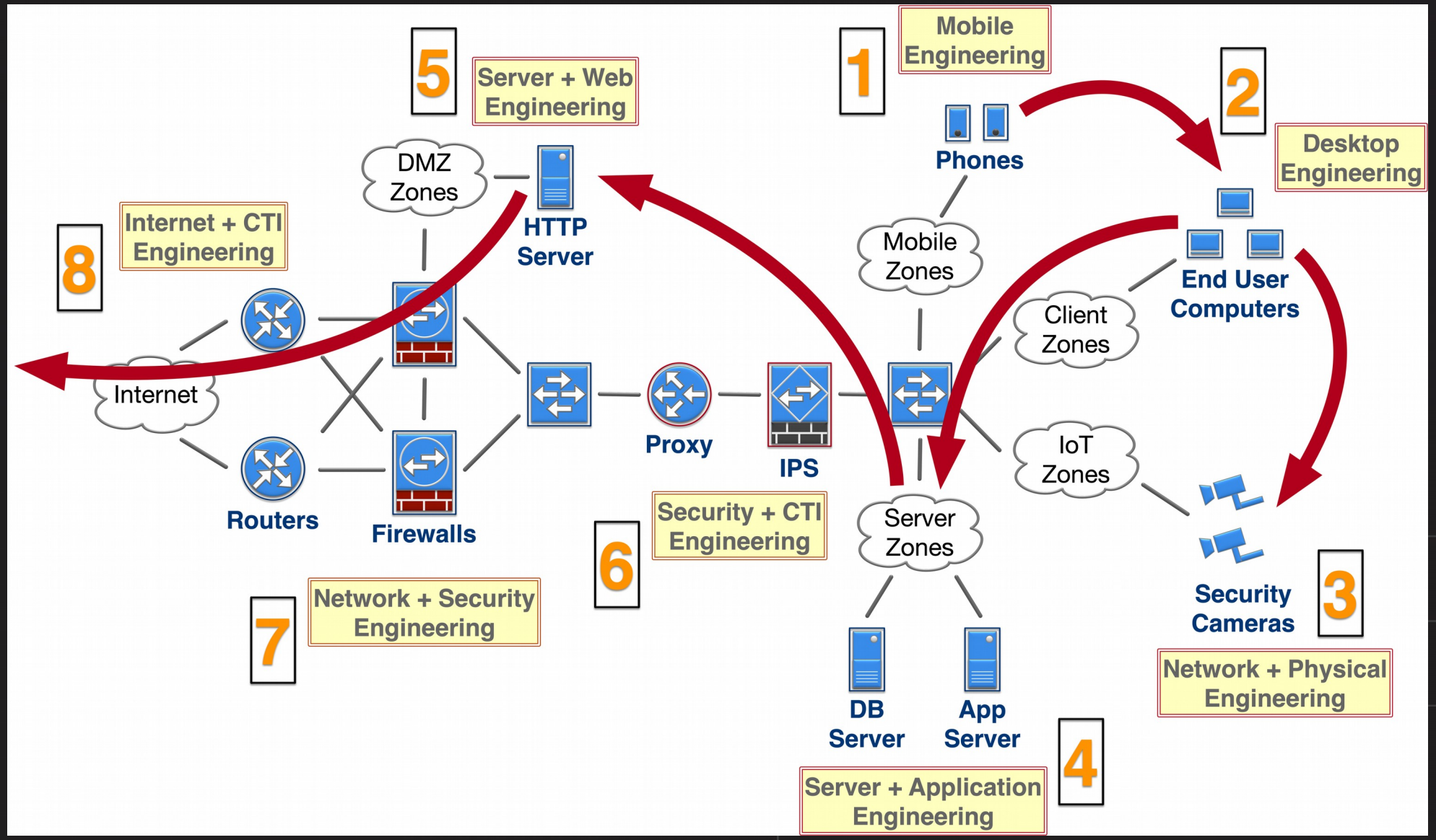
Introduction

- Collaborative Automated Course of Action Operations for Cyber Security
- Mailing List: cacao@ietf.org
  - https://www.ietf.org/mailman/listinfo/
- CACAO Draft: draft-jordan-cacao-introduction-00
- **BoF: Friday 9:30 - 10:00 in Berlin/Brussels**

Problem - Why we need CACAO

- Threats
  - Threat Actors and Intrusion Sets are advancing in speed and sophistication
  - Number of attacks are increasing and attack surface is growing
  - Time available to adequately respond and remain effective is decreasing and standards-based machine-readable operational behavior is needed
- Defense
  - Manual, slow, reactive, and siloed
  - Many disparate systems are usually involved
  - Many different groups are part of the response
  - Need to respond across multiple coordinated systems
  - No easy way to share threat response expertise

Problem - Why we need CACAO



What is CACAO?

- Collaborative Automated Course of Action Operations for Cyber Security
- A standard that defines structured and machine parsable playbooks
  - **Creation** of those playbooks
  - **Distribution** of those playbooks across systems
  - **Monitoring** of those playbooks and their results
- It includes documenting and describing the steps needed to **prevent**, **mitigate**, **remediate**, and **monitor** responses to a threat, an attack, or an incident
- It will build upon on existing underlying communication protocols and interfaces that enable the systems involved in CACAO

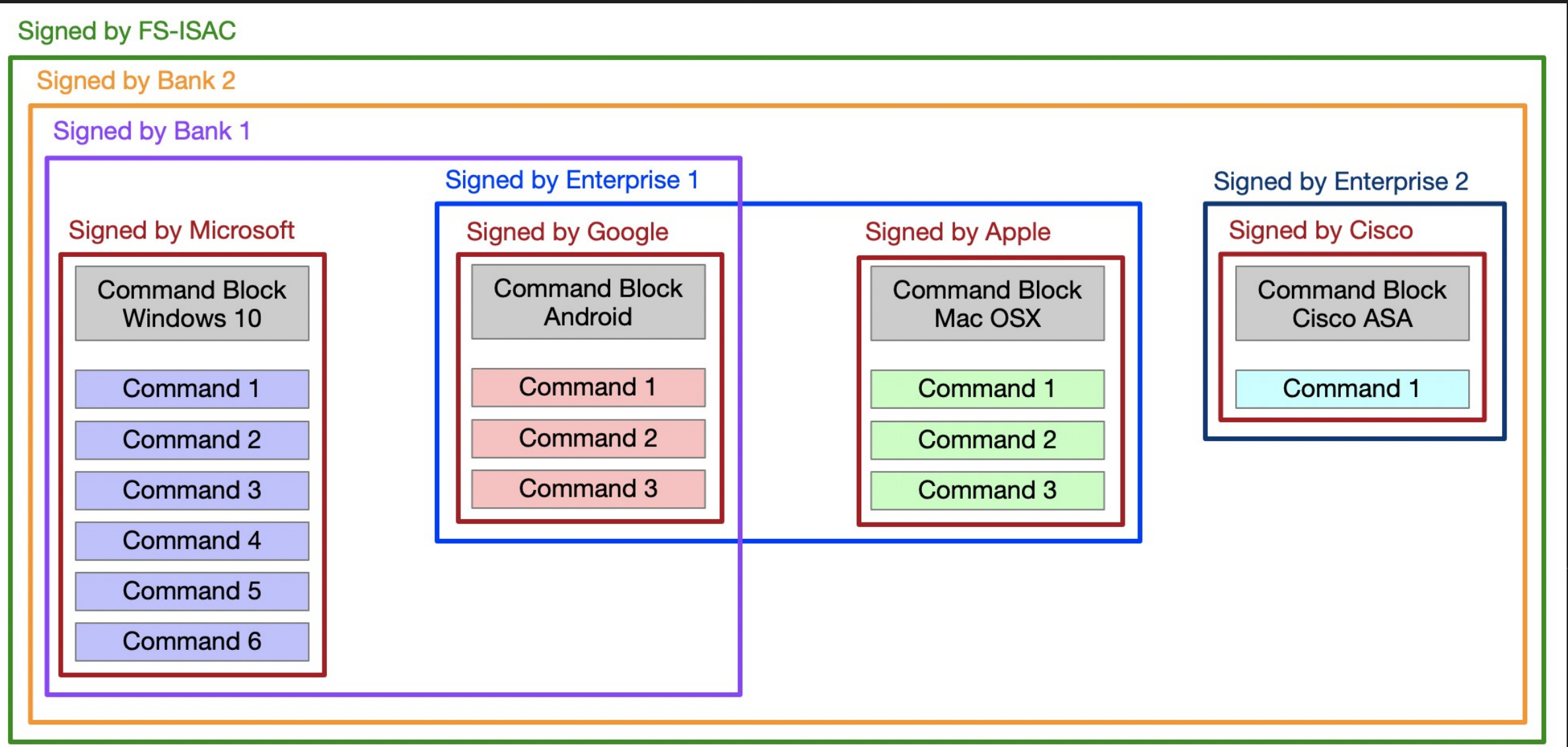
What CACAO is NOT!

- This is not a standard for sharing arbitrary content or data
- This is not about documenting an incident, indicators of compromise, or threat actor behavior
- This is not an effort to redefine standards like I2NSF, NetConf, STIX, TAXII, OpenC2, SUIT, etc.
  - CACAO will try and make use of other standards from the IETF and other SDOs

What are Playbooks?

- Documentation of security processes involving procedural, technical and human capabilities
- Defined and written procedures for operational security
- Typically kept in a binder on the shelf or in a KB article
- Used to orchestrate IT, cyber security, and physical security
  - For this work, physical security is out-of-scope
- Represented using manual and/or automated steps with conditional logic
- Used for **prevention**, **mitigation**, and **remediation**

Example Industry Response



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