

# Trusted and Anonymized Threat Sharing Using Blockchain Technology

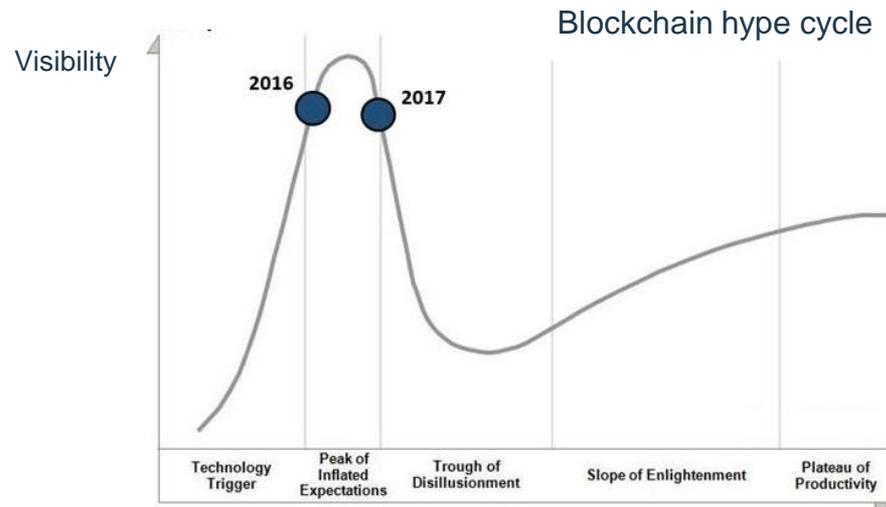


Dr. Yair Allouche

IBM Cyber Security Center of Excellence, Beer Sheva

Feb 19, 2019

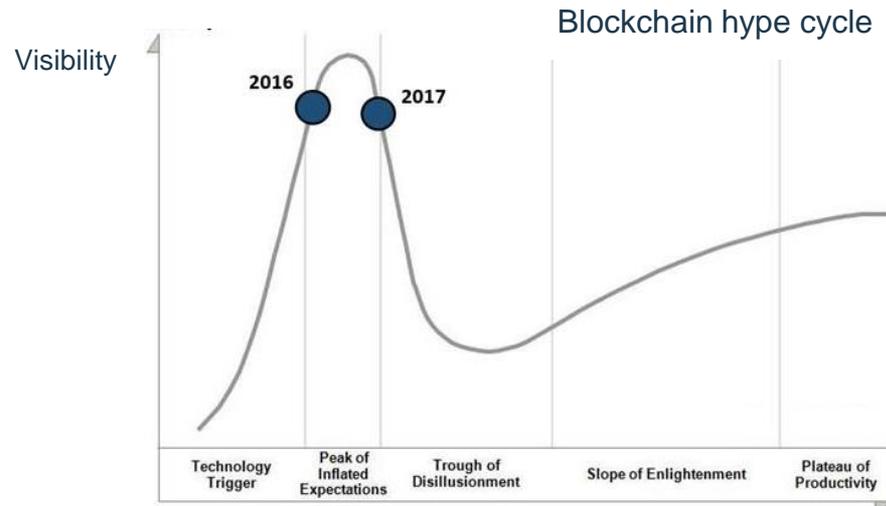
# Agenda



**Source:** Gartner

# Agenda

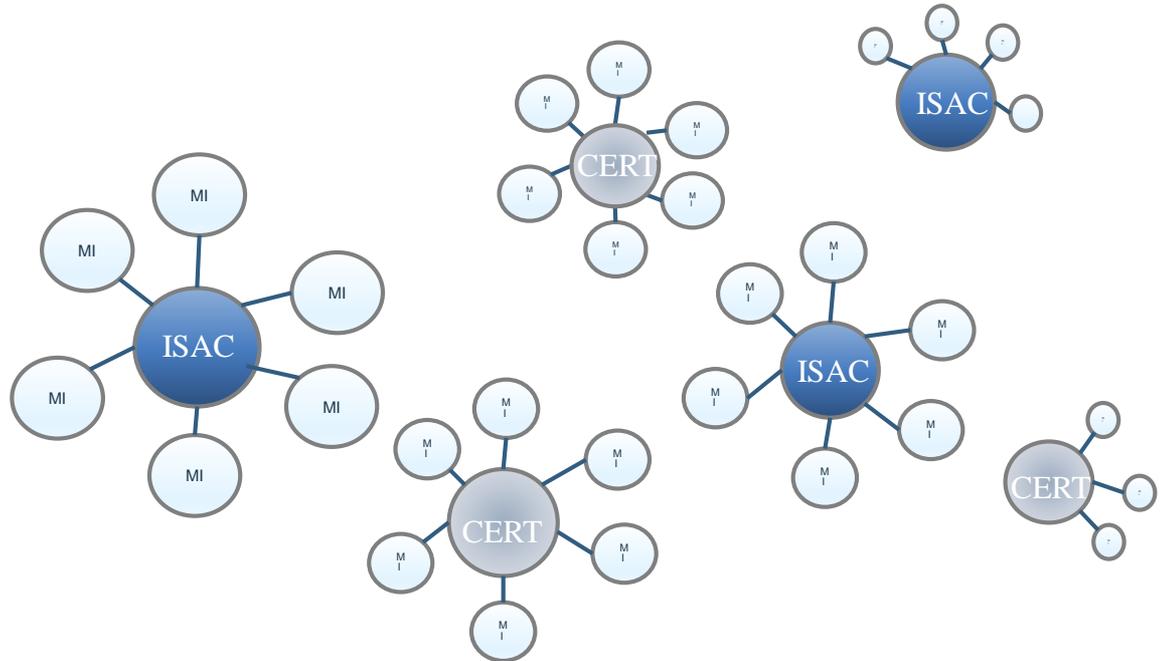
- **Vision:** Next generation threat sharing network
- Current Barriers for Threat Sharing
- Blockchain-based threat sharing platform
- Summary and Q&A



Source: Gartner

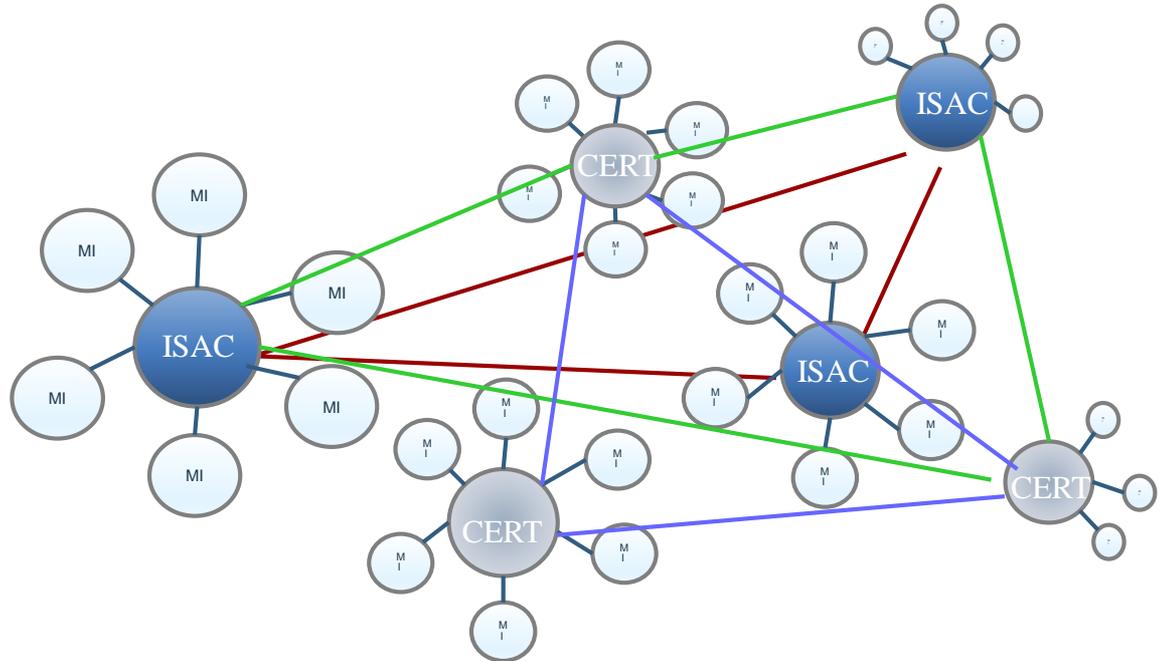
# Vision: Next Generation Threat Sharing Network

- Global and flexible
- Trusted and reliable
- Automated and well integrated within existing workflow
- Built in anonymity



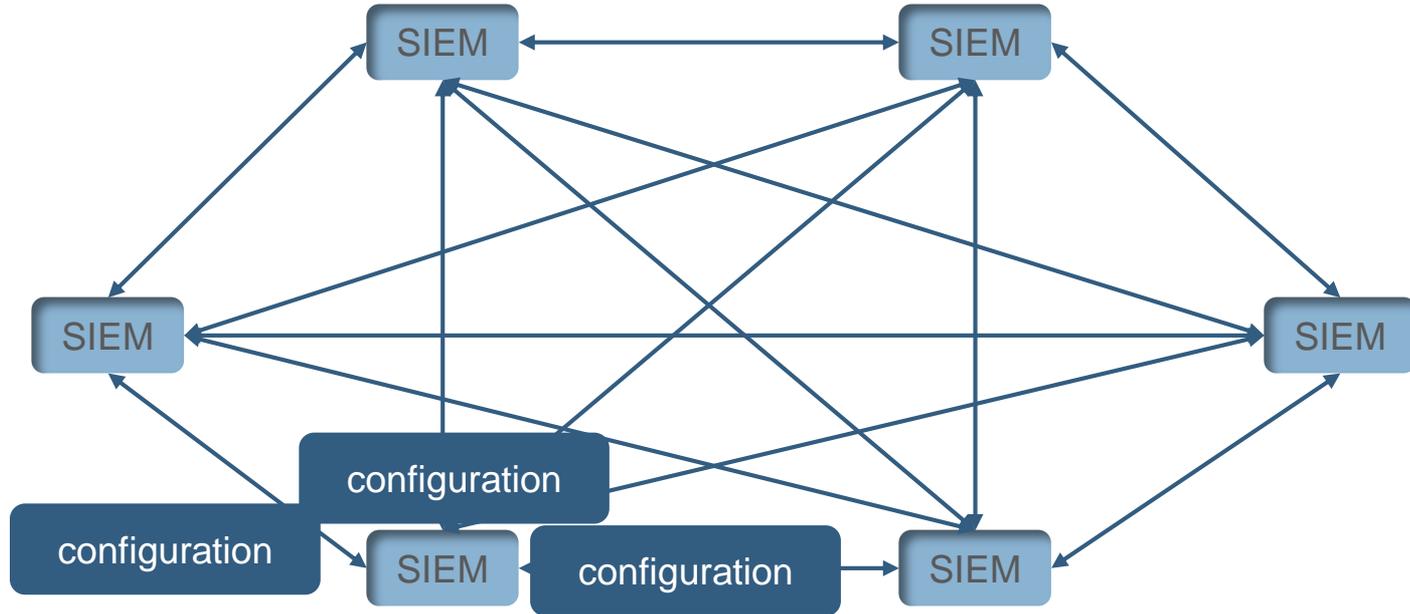
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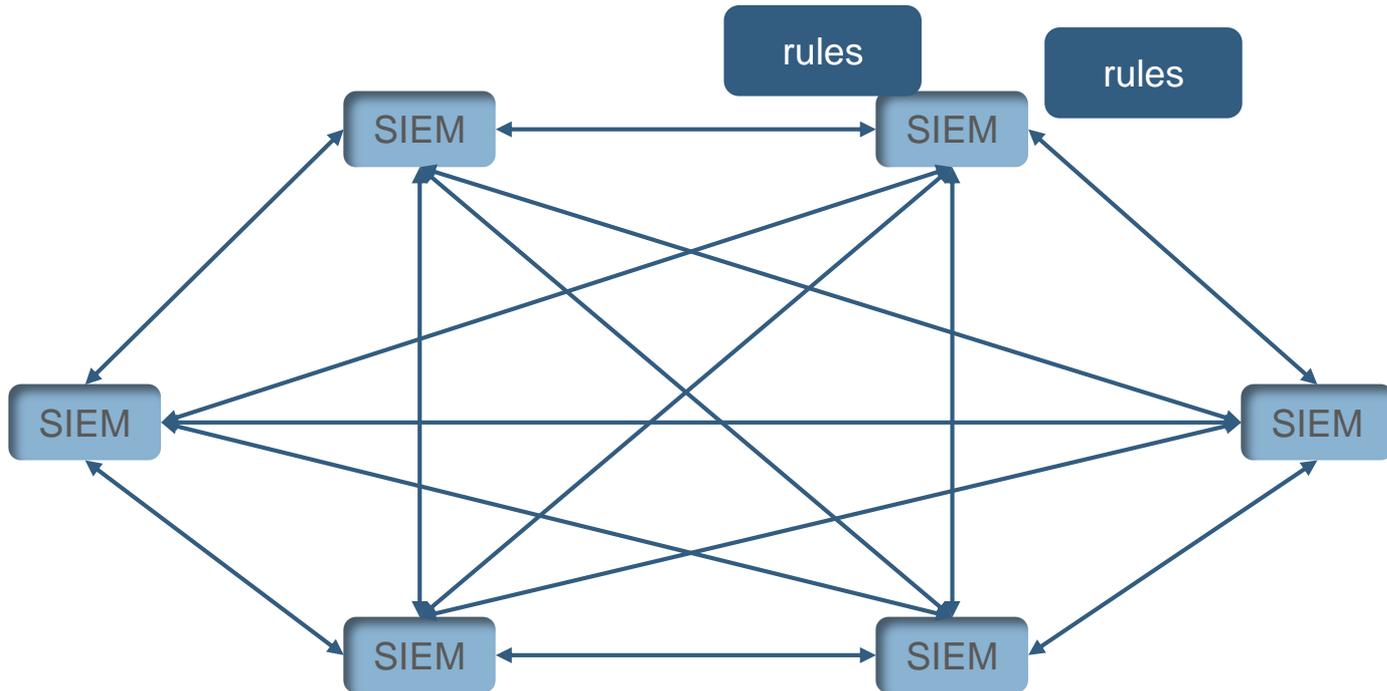
# Next Generation Threat Sharing Network, Example 1

SIEM network



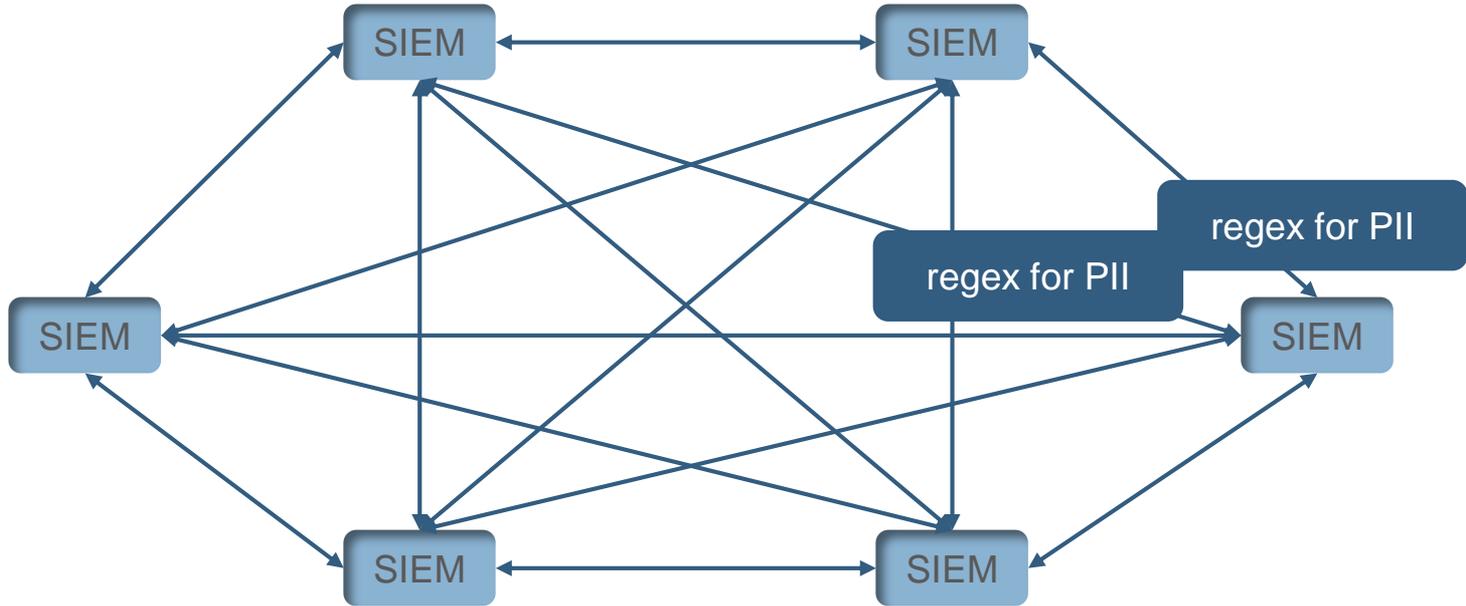
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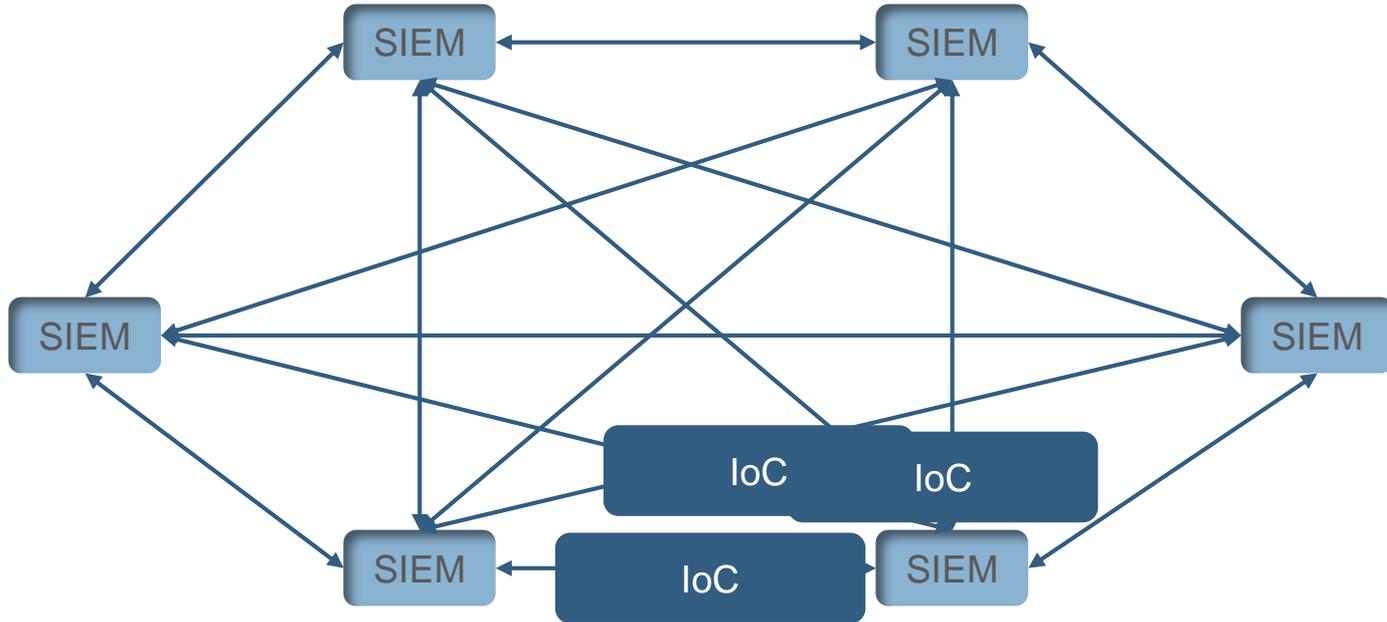
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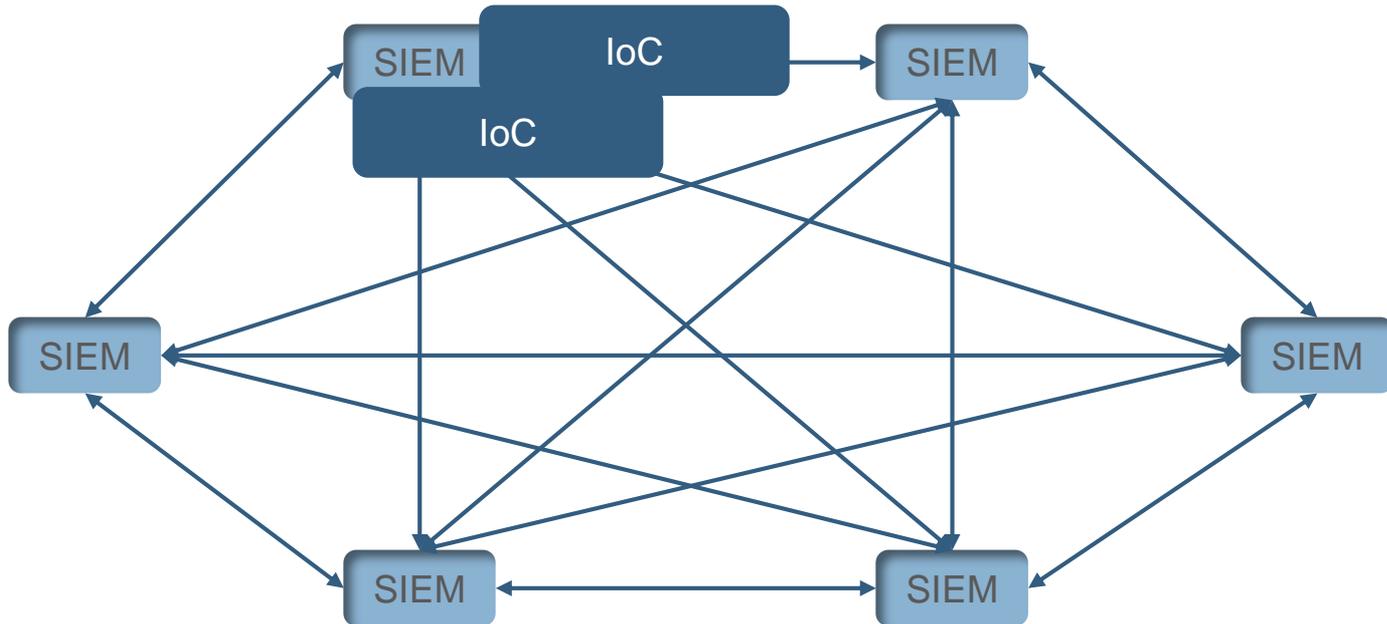
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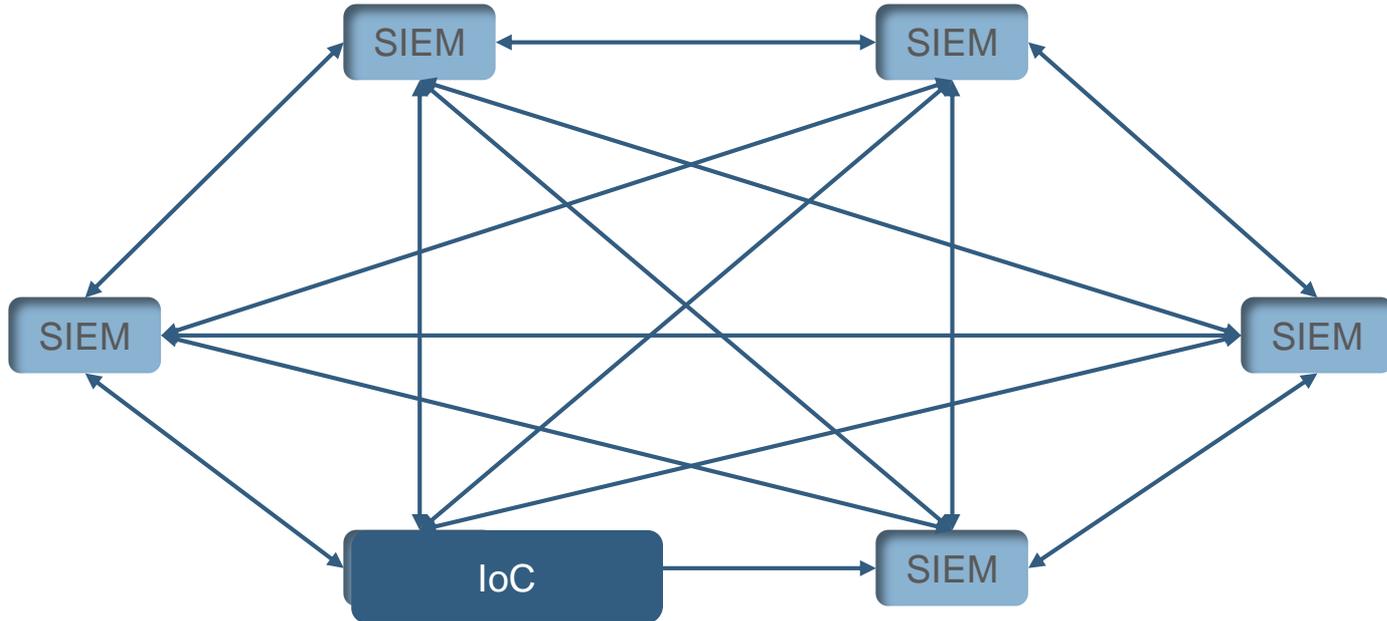
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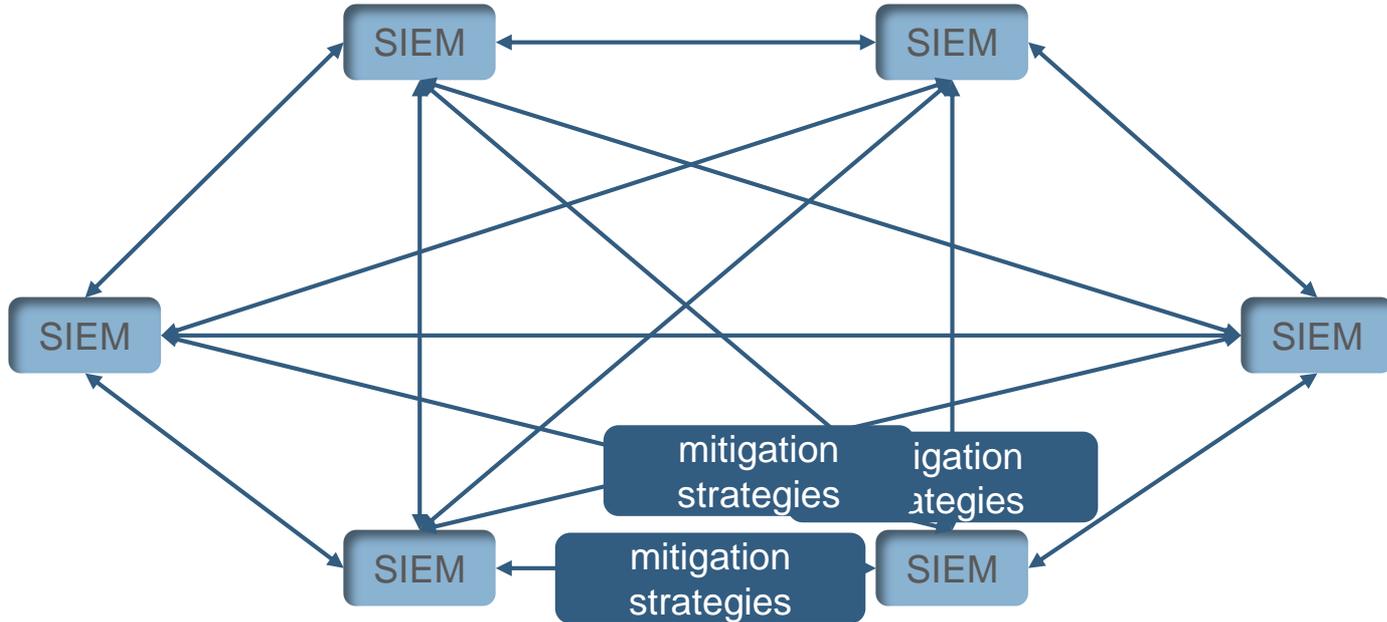
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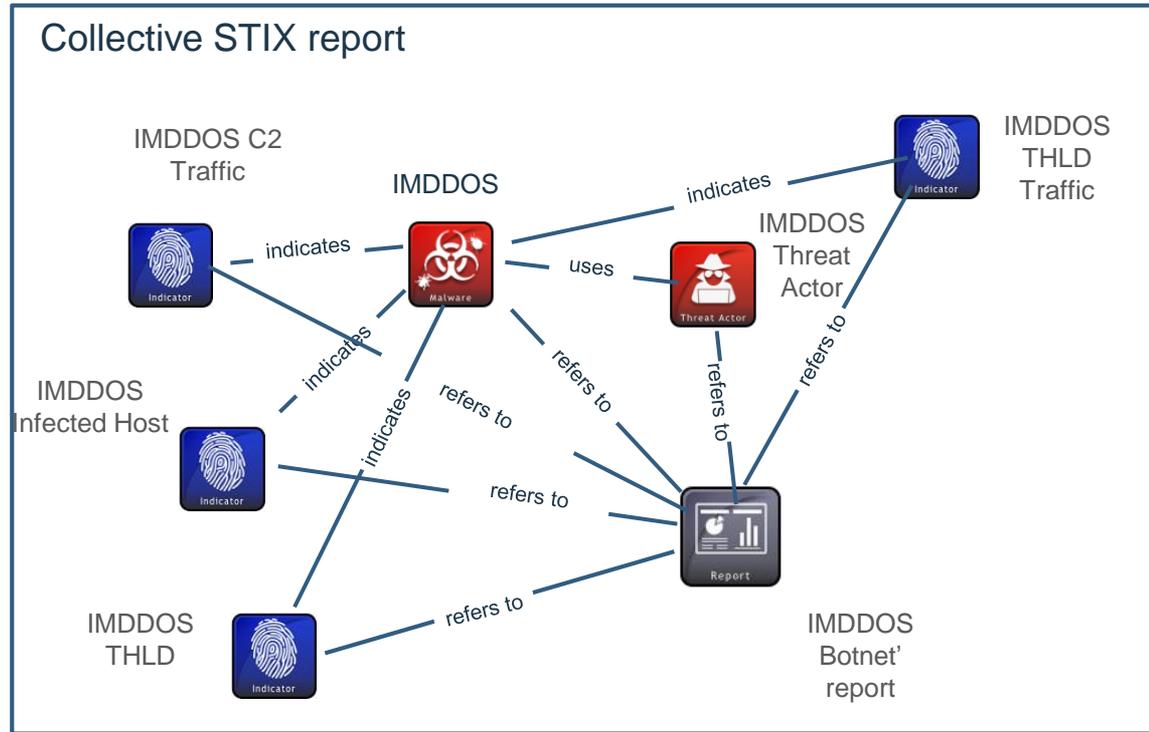


# Next Generation Threat Sharing Network, Example 1

SIEM network

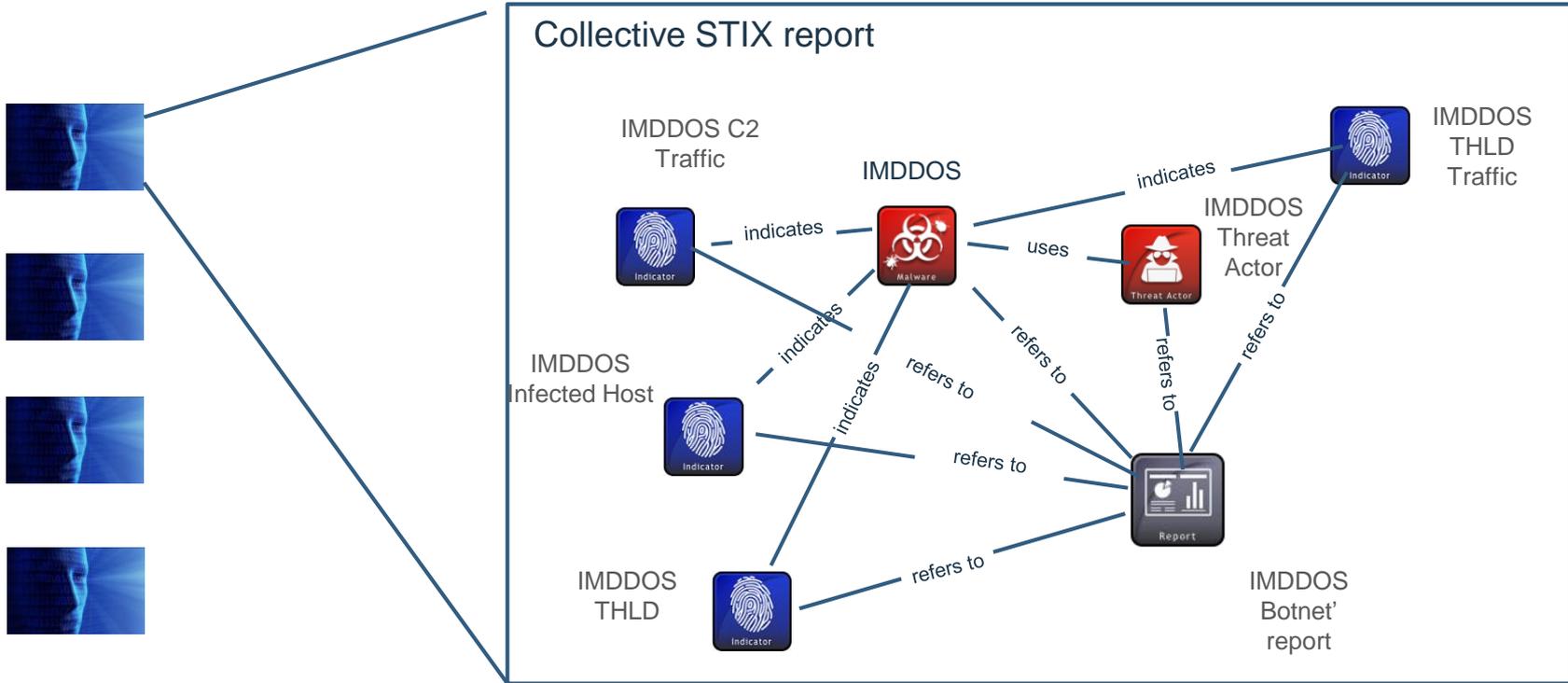


# Next Generation Threat Sharing Network, Example 2



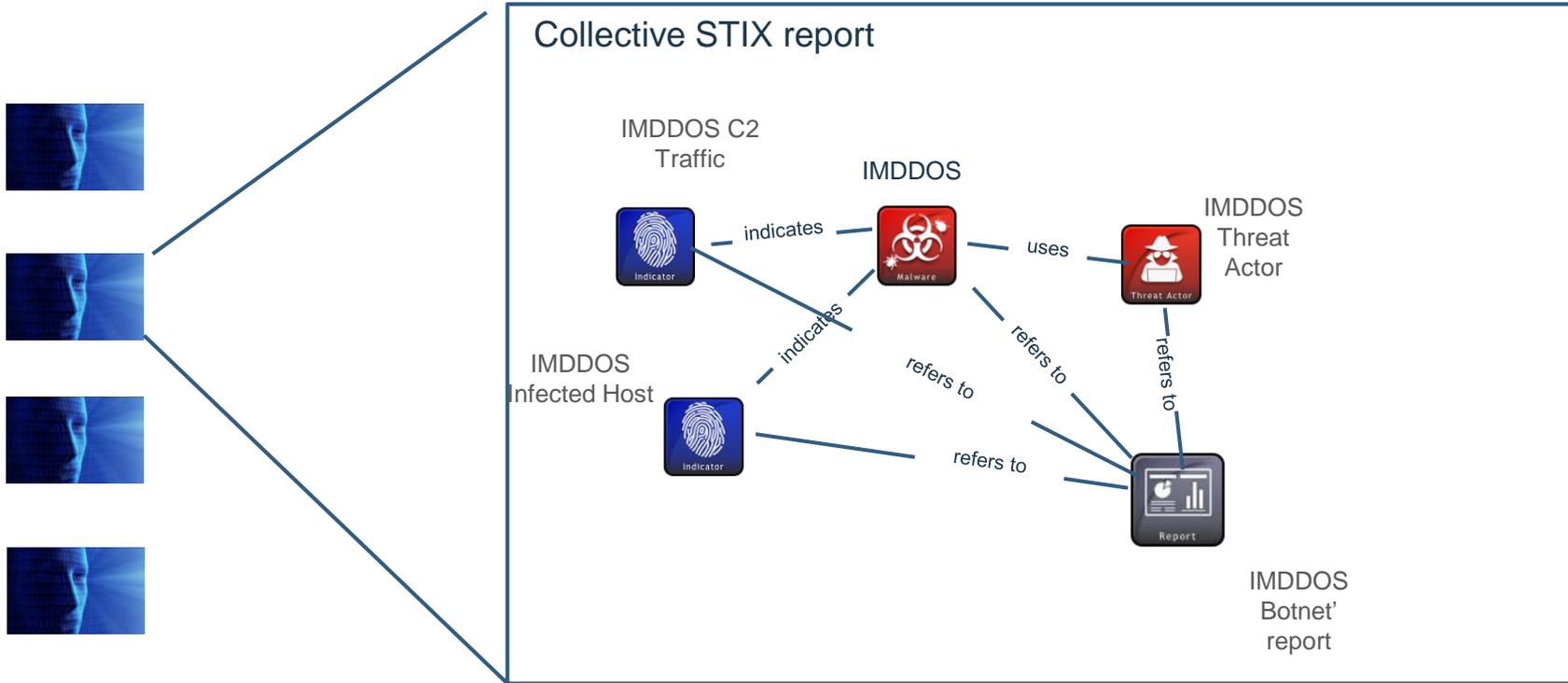
- Leveraging **collective knowledge, experience, and capabilities**

# Next Generation Threat Sharing Network, Example 2



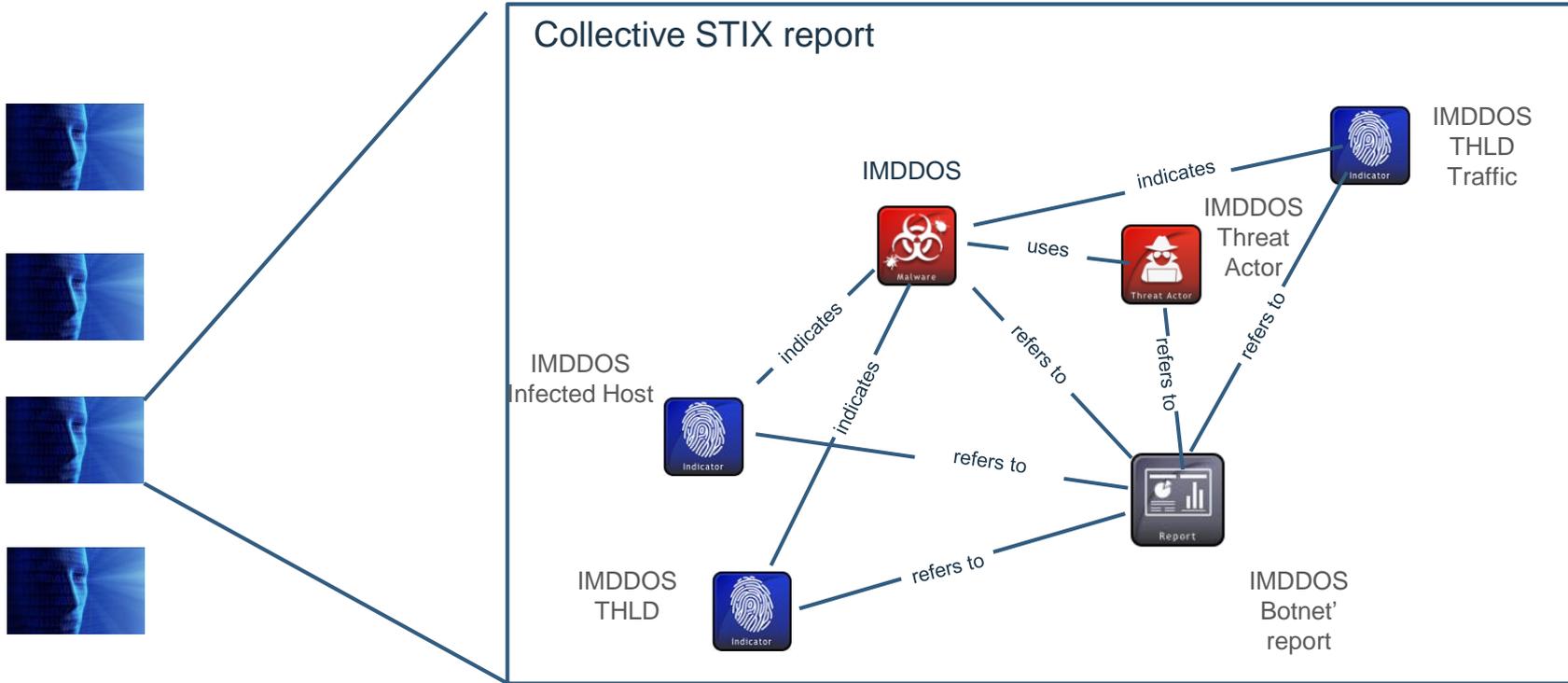
Different views according to trust level

# Next Generation Threat Sharing Network, Example 2



Different views according to trust level

# Next Generation Threat Sharing Network, Example 2



Different views according to trust level



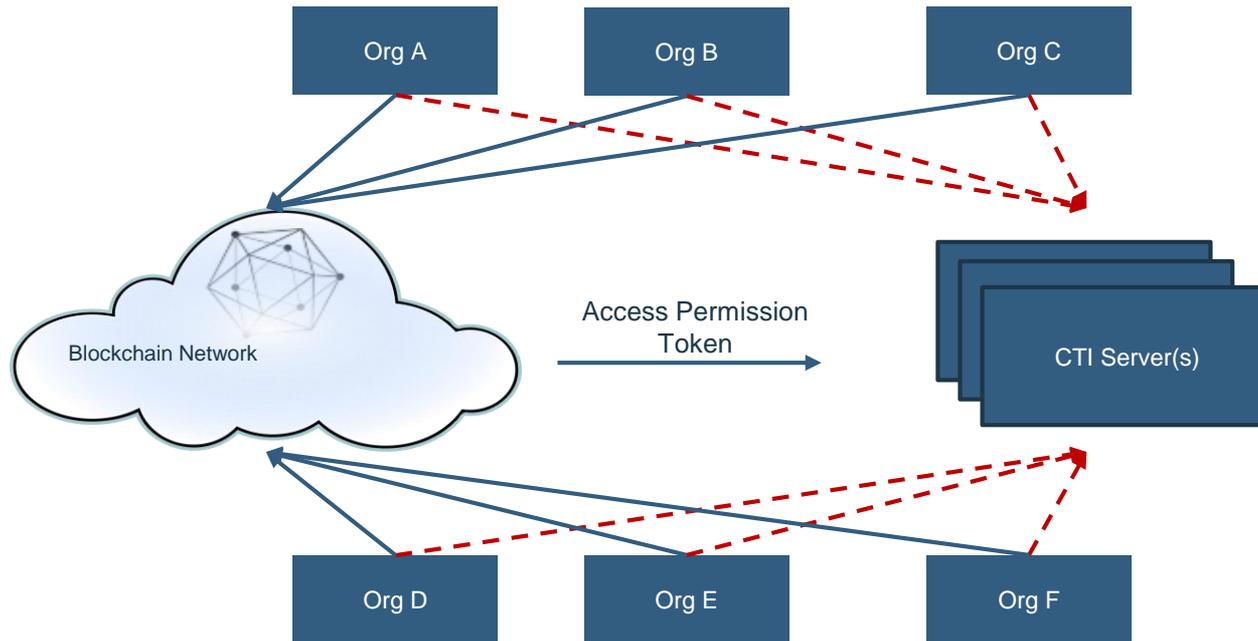
# Why Blockchain

- Provides **anonymity** with **trust**
- **Enable dynamic** and **flexible** data exchange between any two organizations in the network
- Uses smart contracts to enforce data exchange agreement
- Automatic, objective and immutable audit of exchanged information
- Transparency



# Our Approach

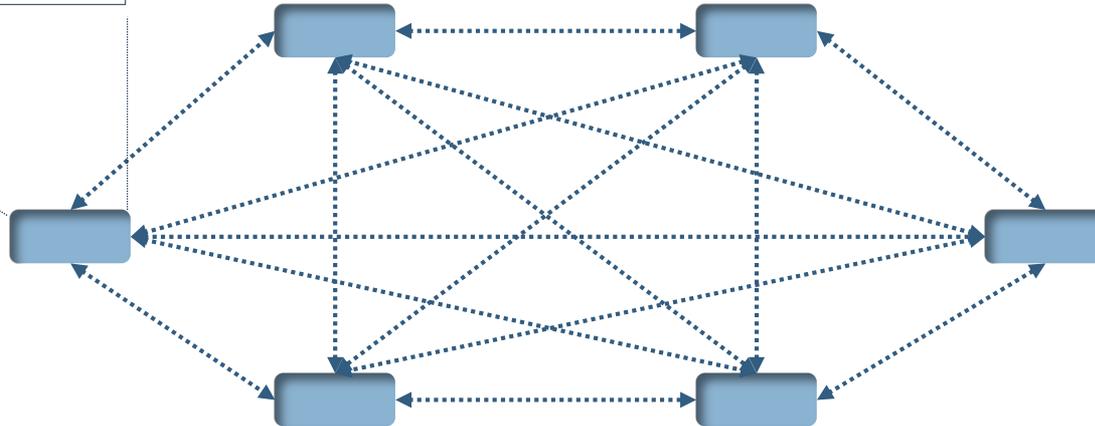
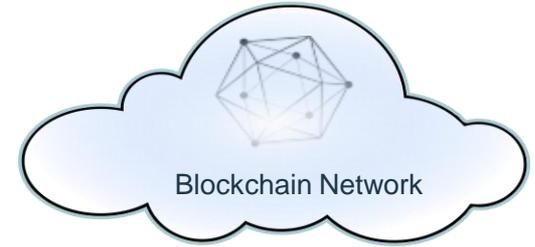
- Blockchain is used to supervise access management
- Cyber Threat Intelligence is exchanged of chain



# Our Approach

## *Org profile*

- *Issuer: I-Cert*
- *Role: CISO*
- *Sector: Finance*
- *Headquarter: New York*
- *FS-ISAC Member*
- *Splunk customer*
- *Reputation score....*

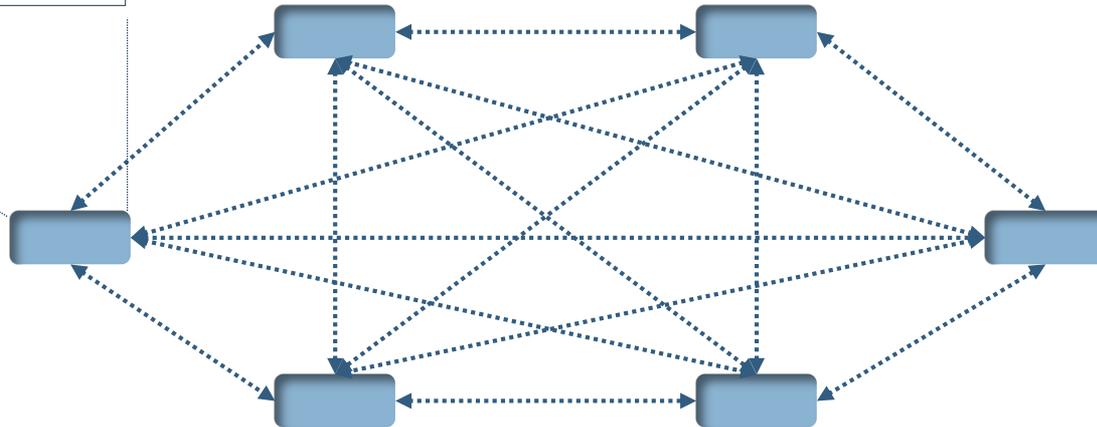


# Our Approach



**Consumption/ Sharing policy**

- *Issuer white/black list*
- *Reputation higher than ...*

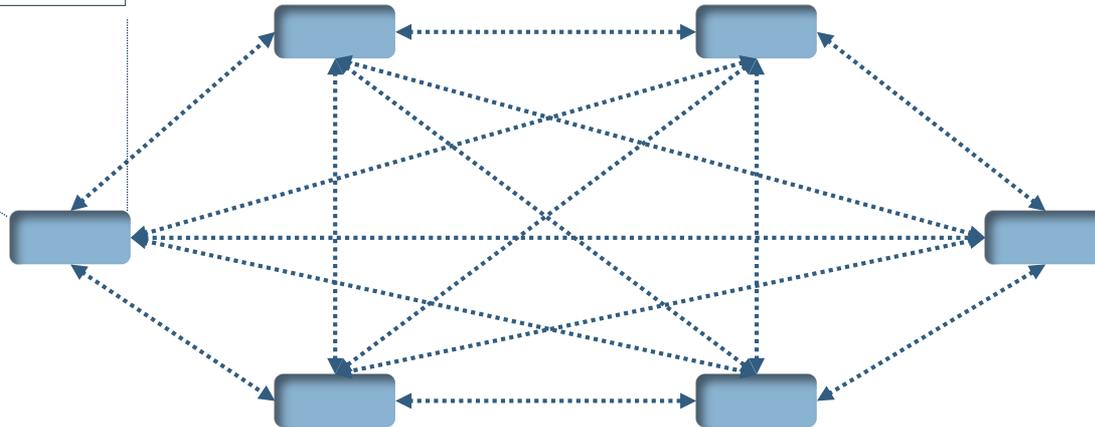


# Our Approach



## Consumption/ Sharing policy

- *ISAC members*
- *Geo white/blacklist*

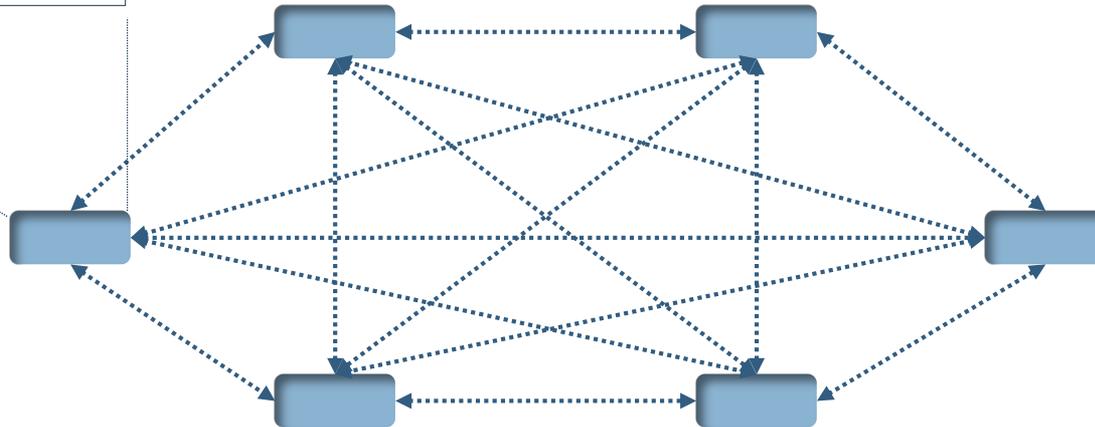


# Our Approach

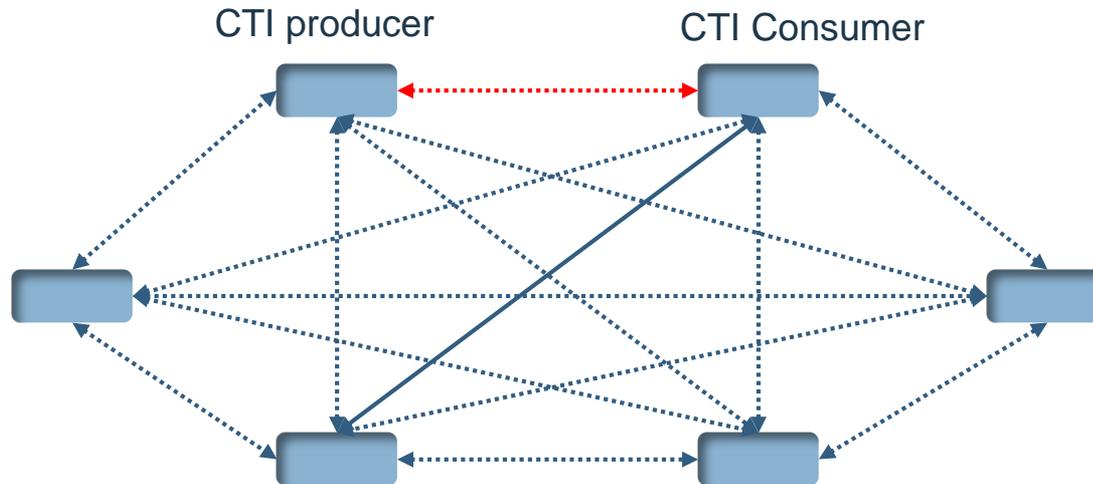
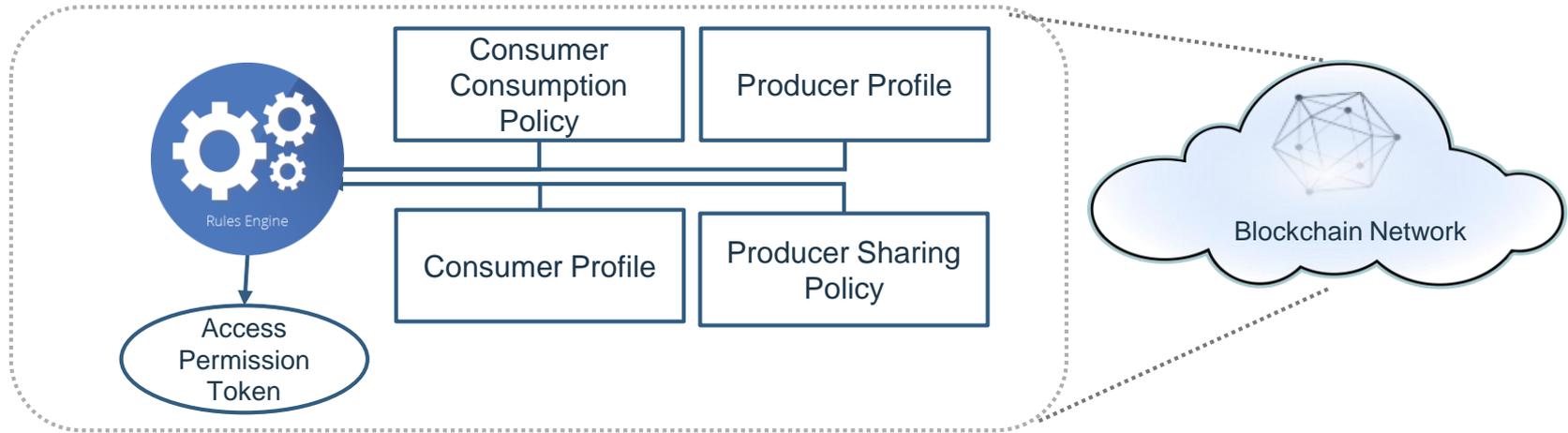


## Consumption/ Sharing policy

- *Splunk costumers*
- *white/black list of user rule*



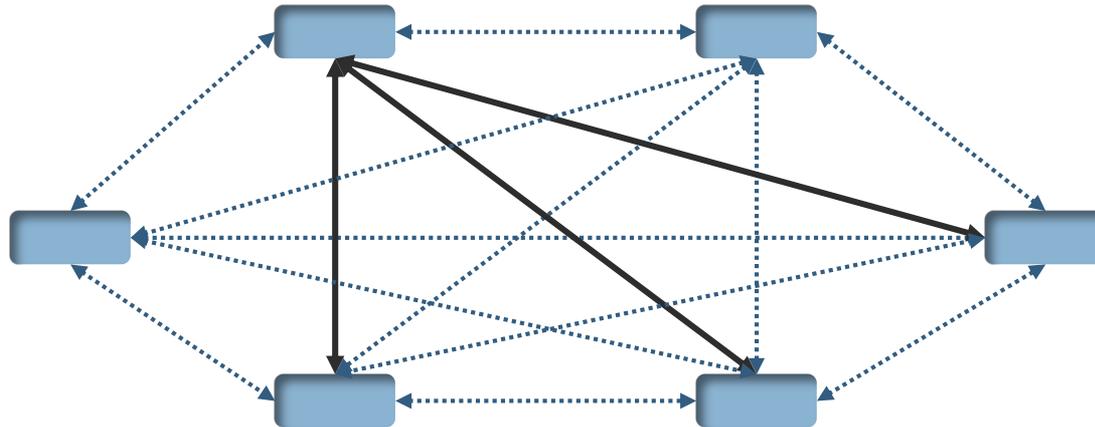
# Our Approach



# Our Approach

## Sharing policy

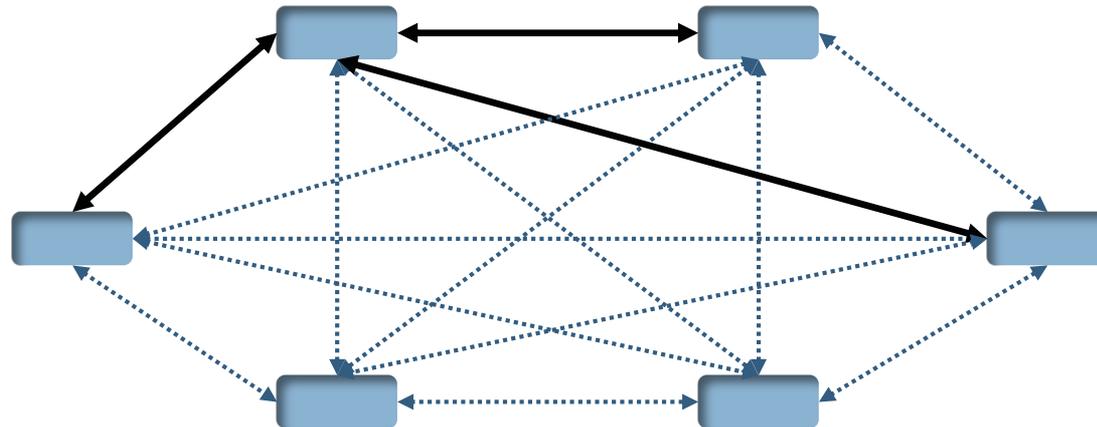
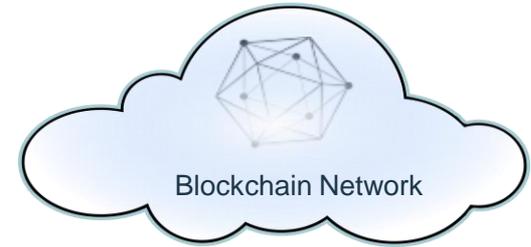
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# Our Approach

*Sharing policy*

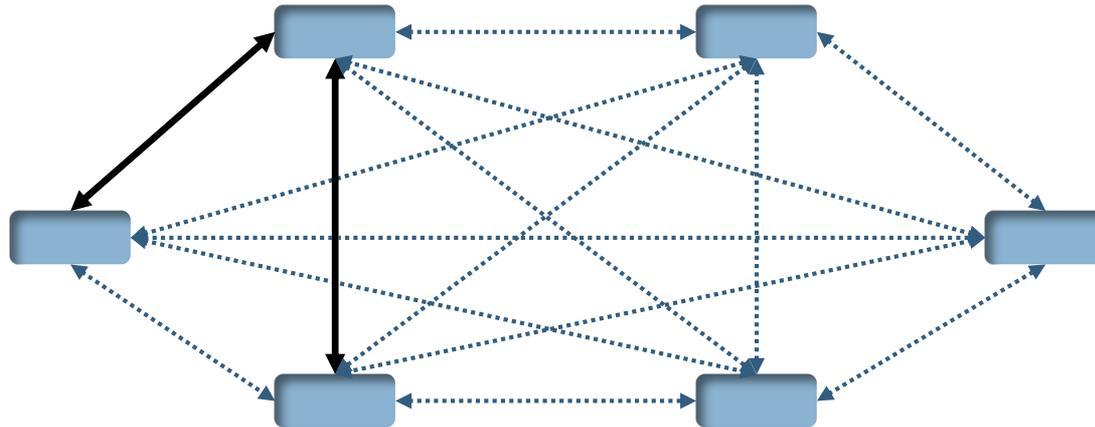
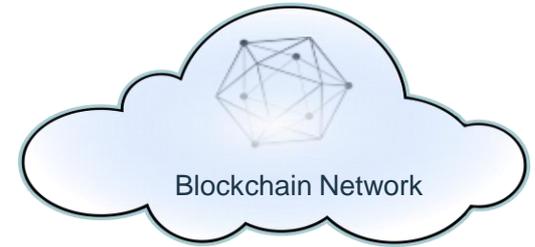
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# Our Approach

## Sharing policy

- *Splunk costumers*
- *white/black list of user rule*



# Summary: The Next Generation Threat Sharing Platform

- Blockchain can provide real benefits for threat sharing
- Reaching a critical mass is the key challenge
- IBM is running pilots with several stake holders
- Working with partners to promote the solution globally

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