IBM Security

Trusted and Anonymized Threat Sharing Using Blockchain Technology

Dr. Yair Allouche

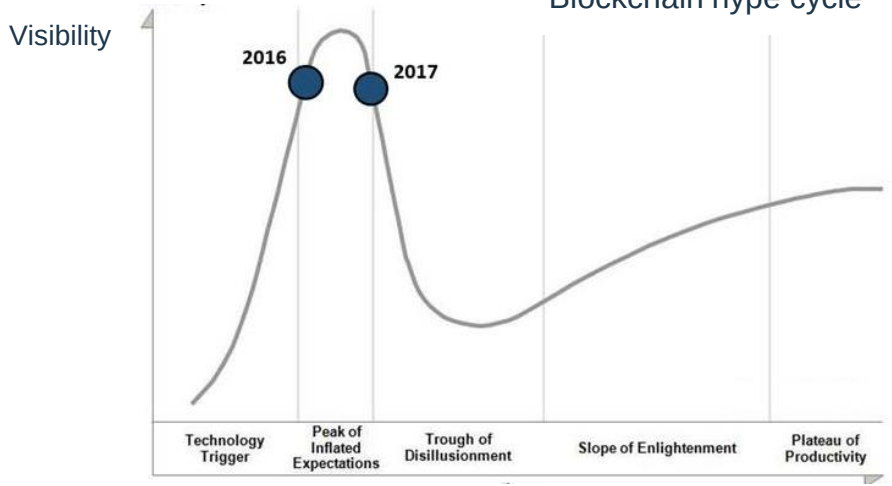
IBM Cyber Security Center of Excellence, Beer Sheva

Feb 19, 2019

IBM

Agenda

Blockchain hype cycle

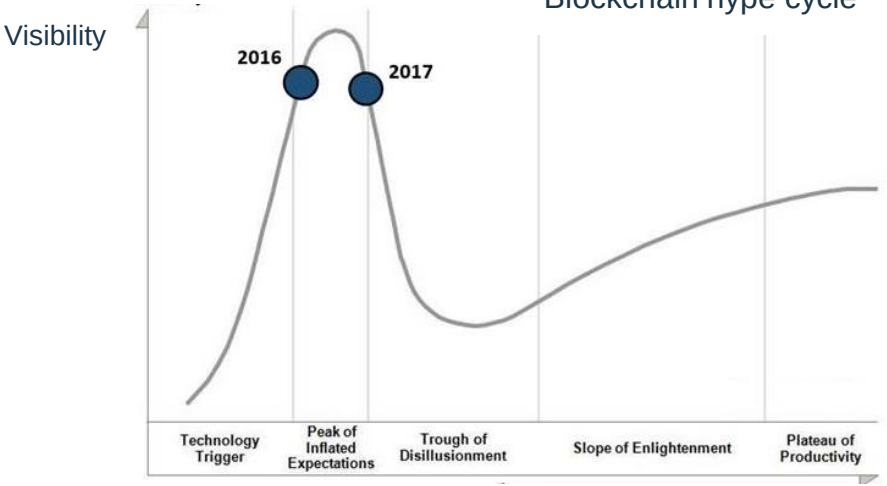


Source: Gartner

Agenda

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

Blockchain hype cycle



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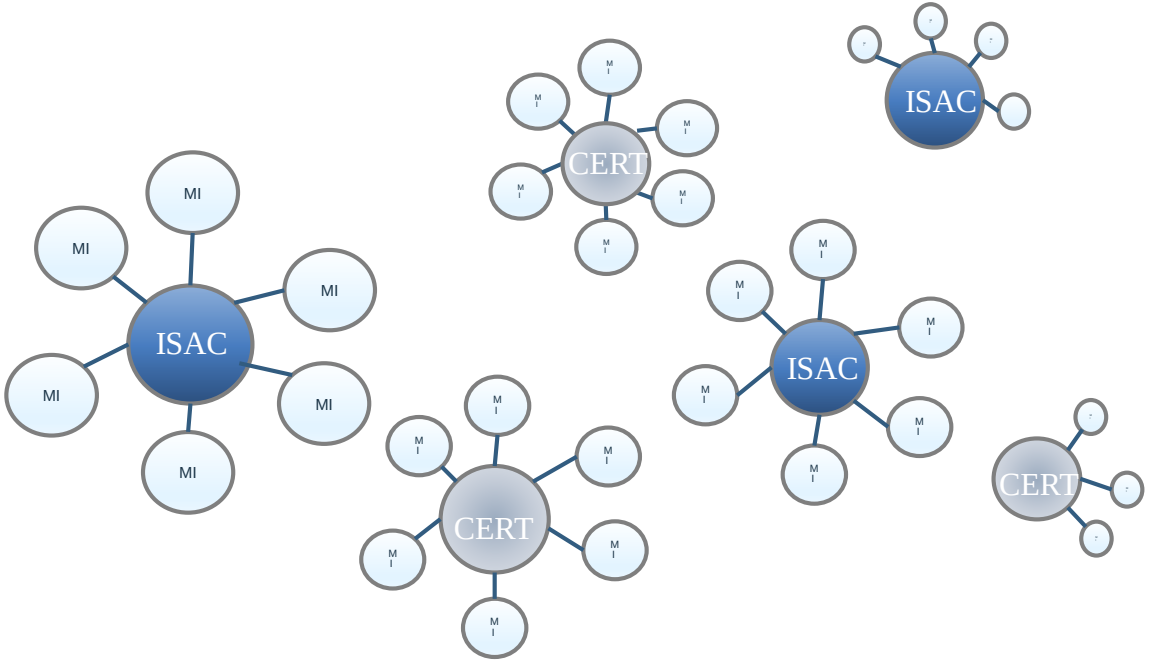
Vision: Next Generation Threat Sharing Network

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



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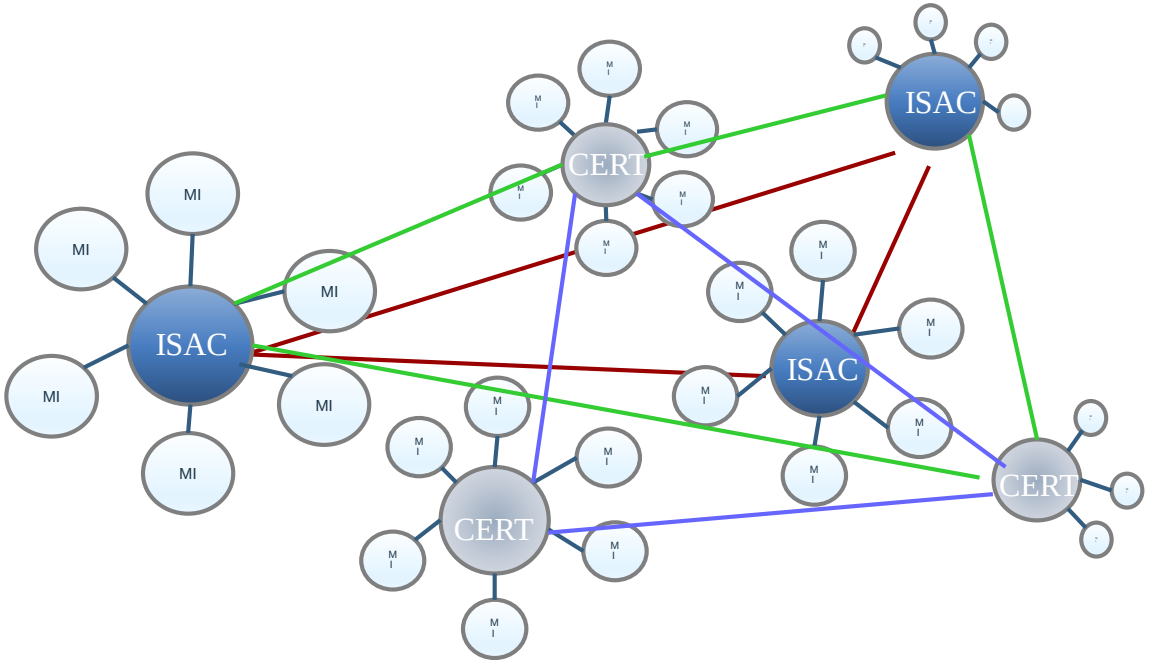
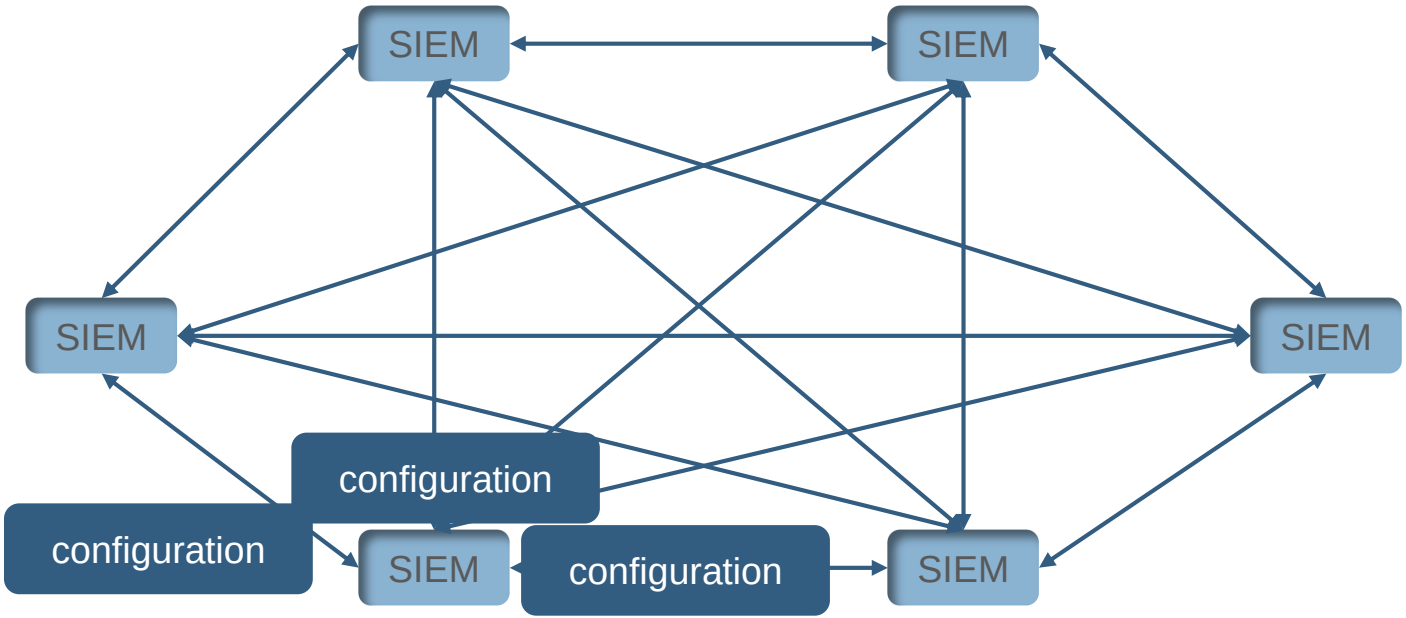


Next Generation Threat Sharing Network, Example 1

SIEM network



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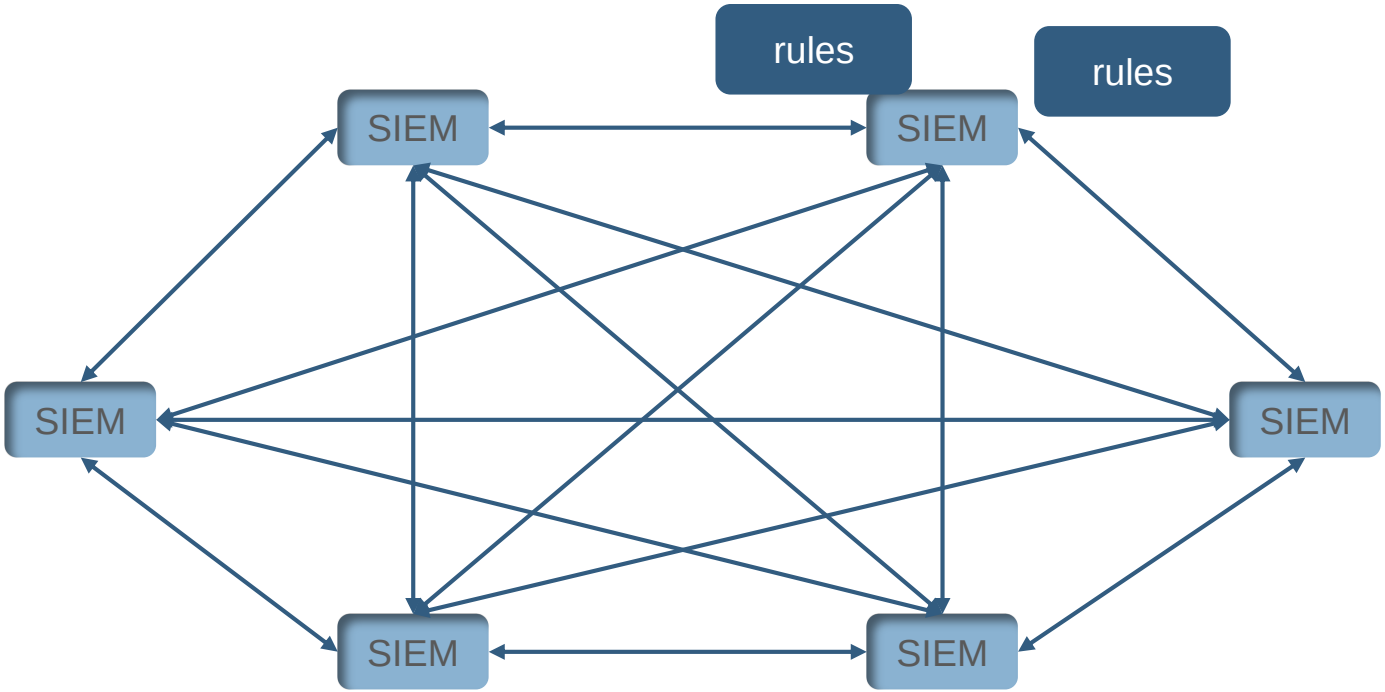

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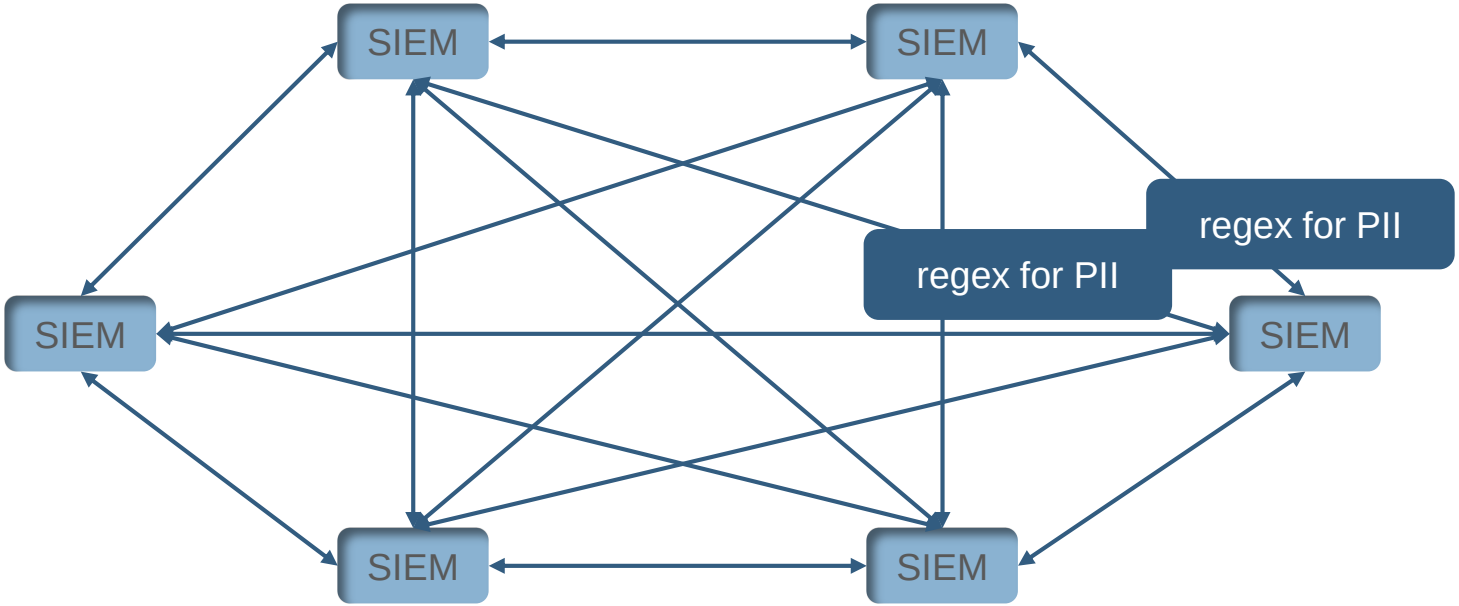

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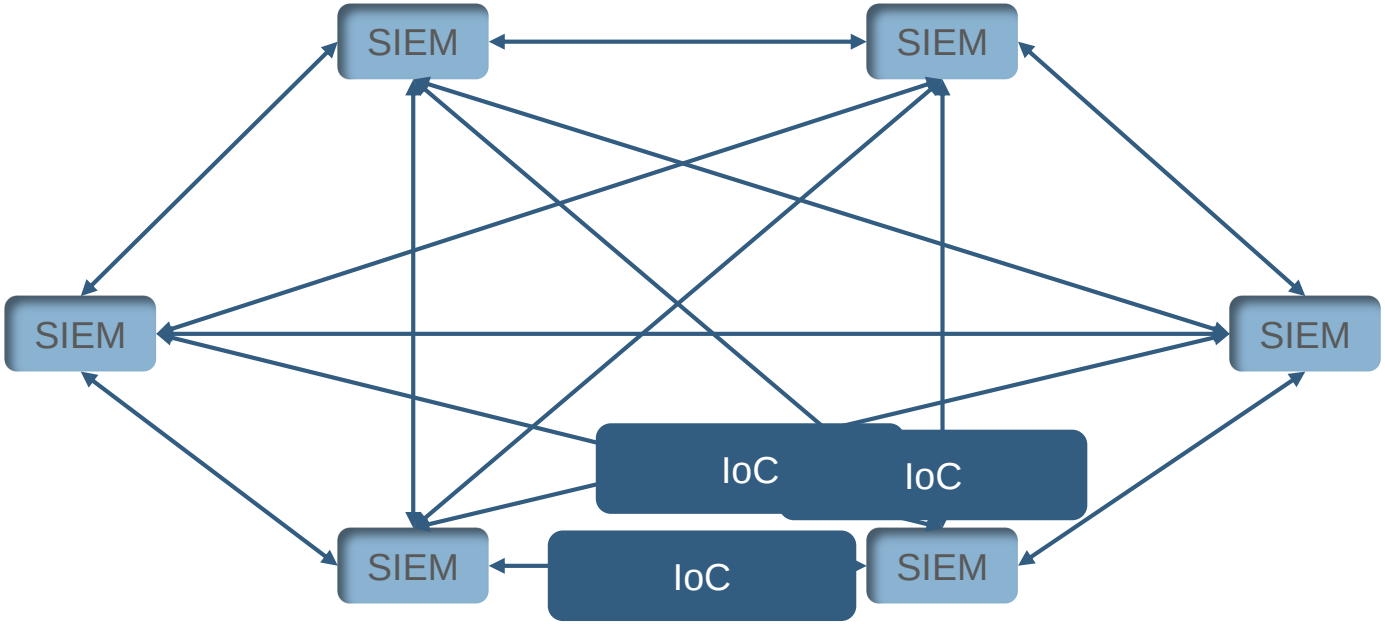

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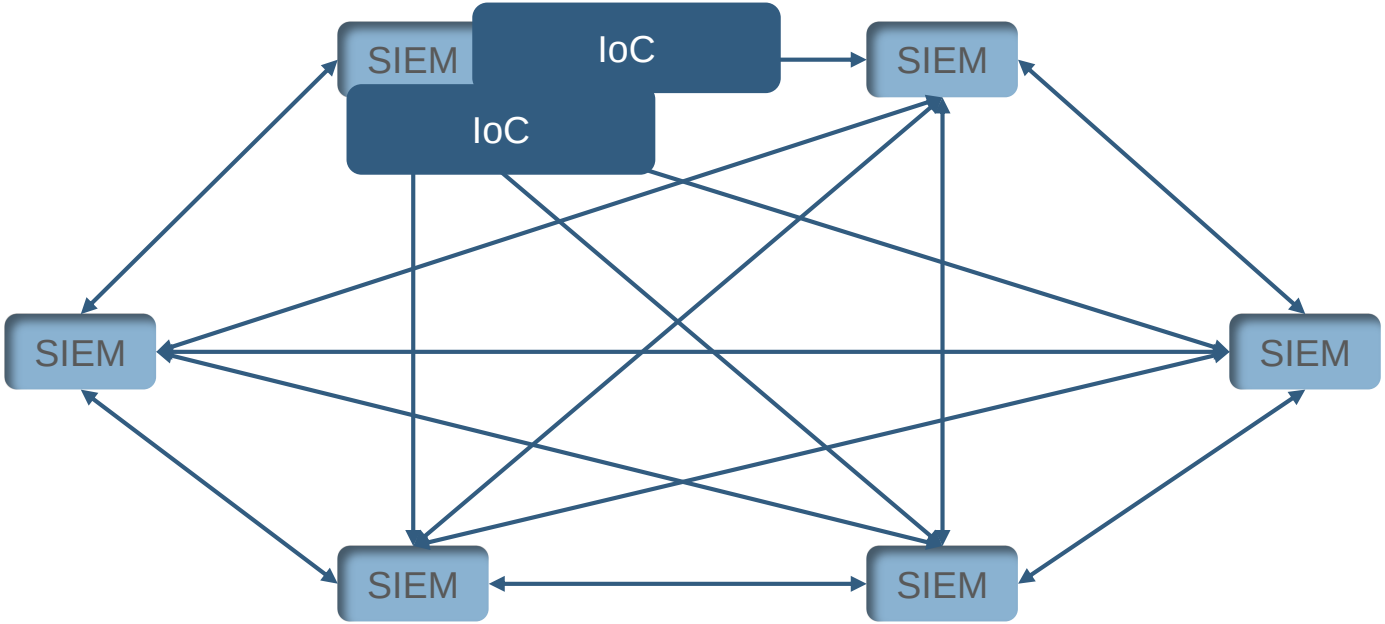

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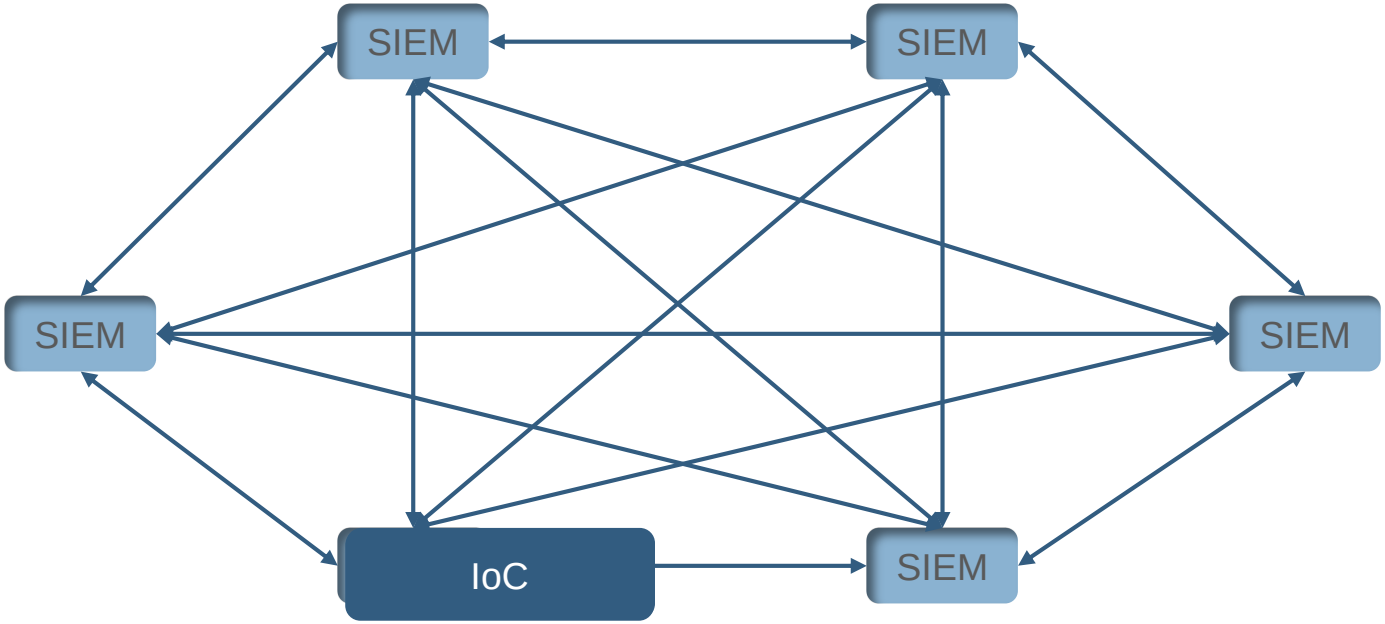

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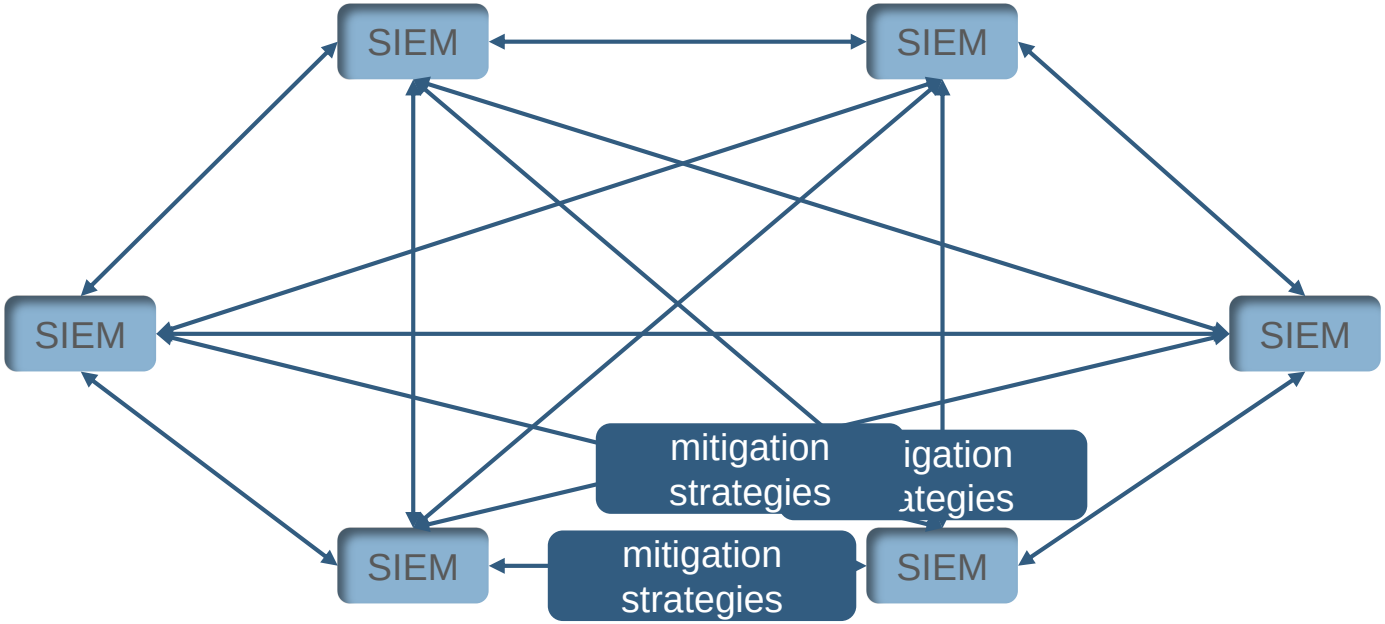
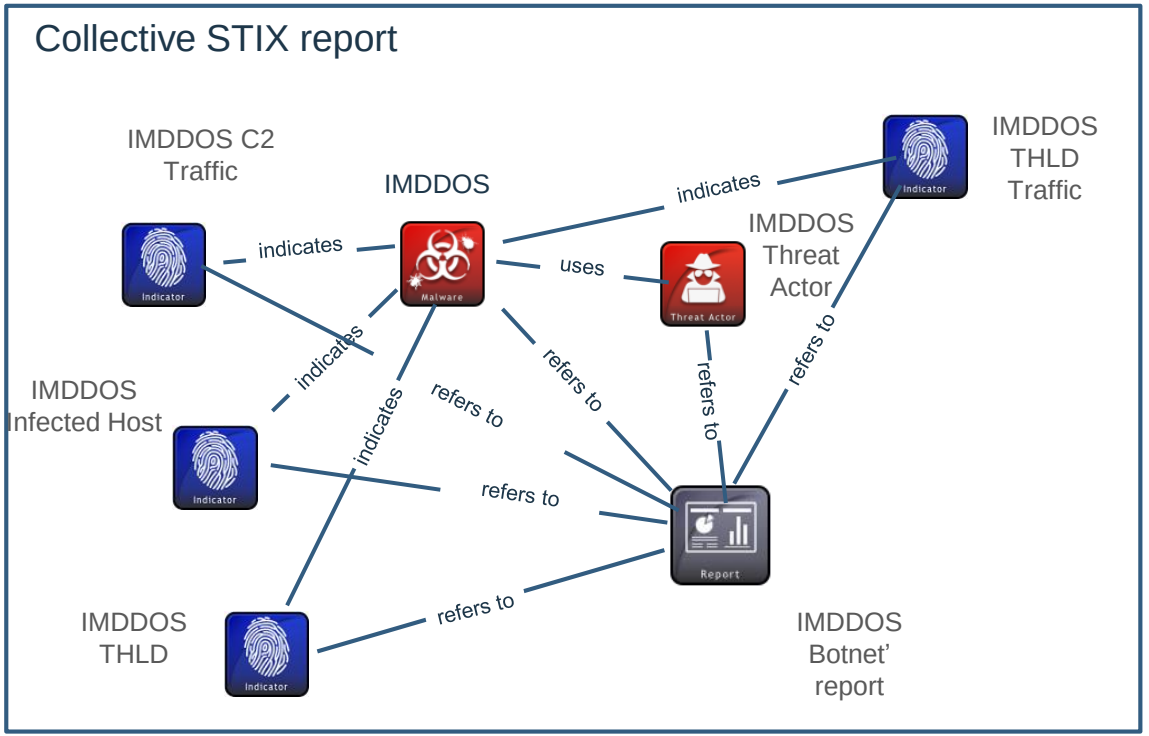


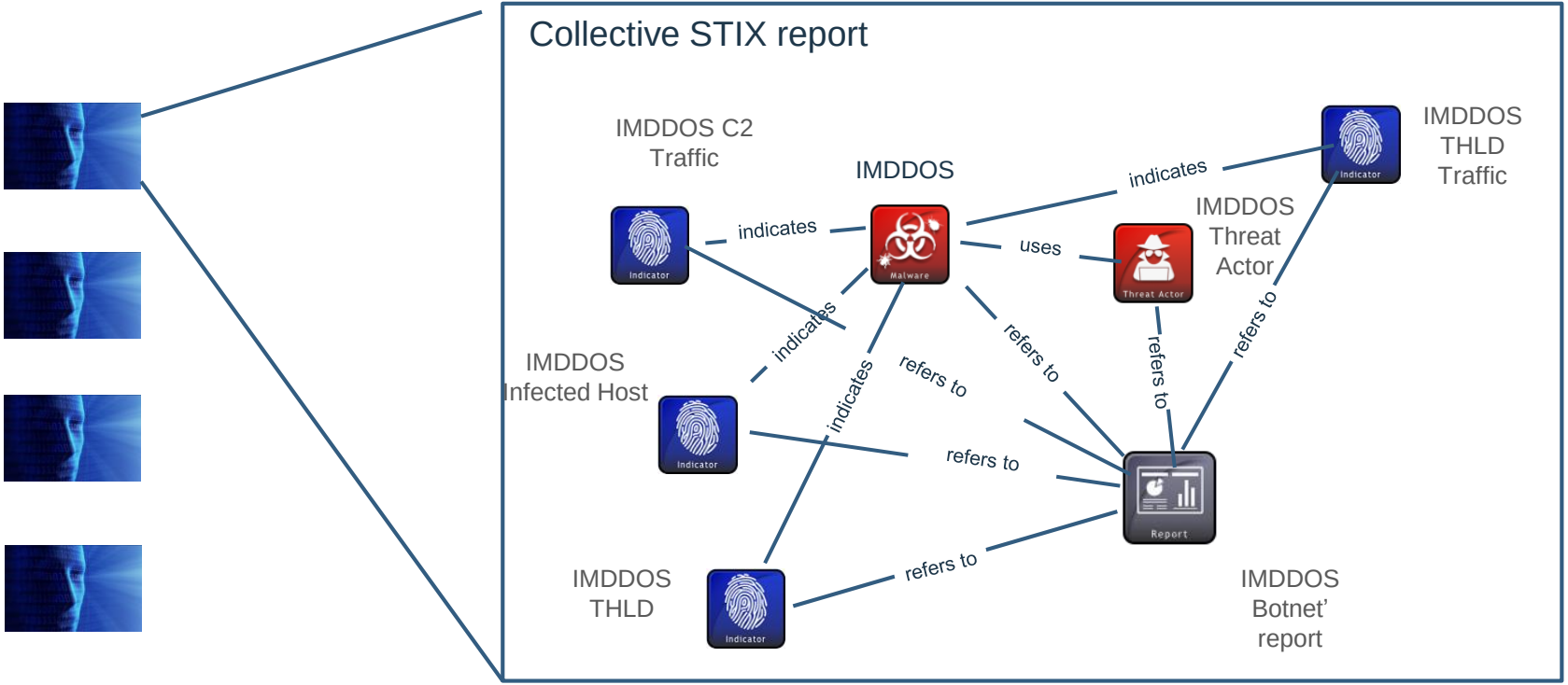
Next Generation Threat Sharing Network, Example 2



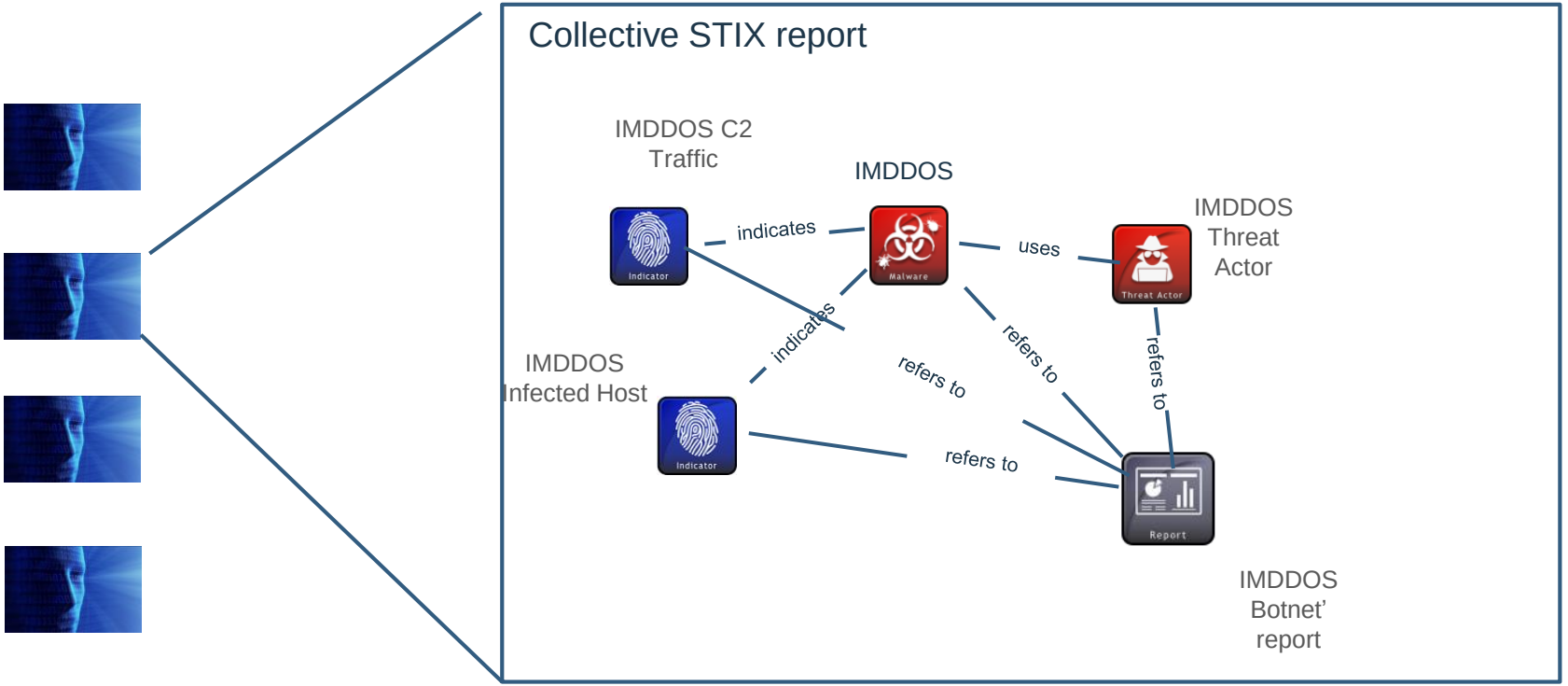
- Leveraging **collective knowledge, experience, and capabilities**

Next Generation Threat Sharing Network, Example 2



Different views according to trust level

Next Generation Threat Sharing Network, Example 2



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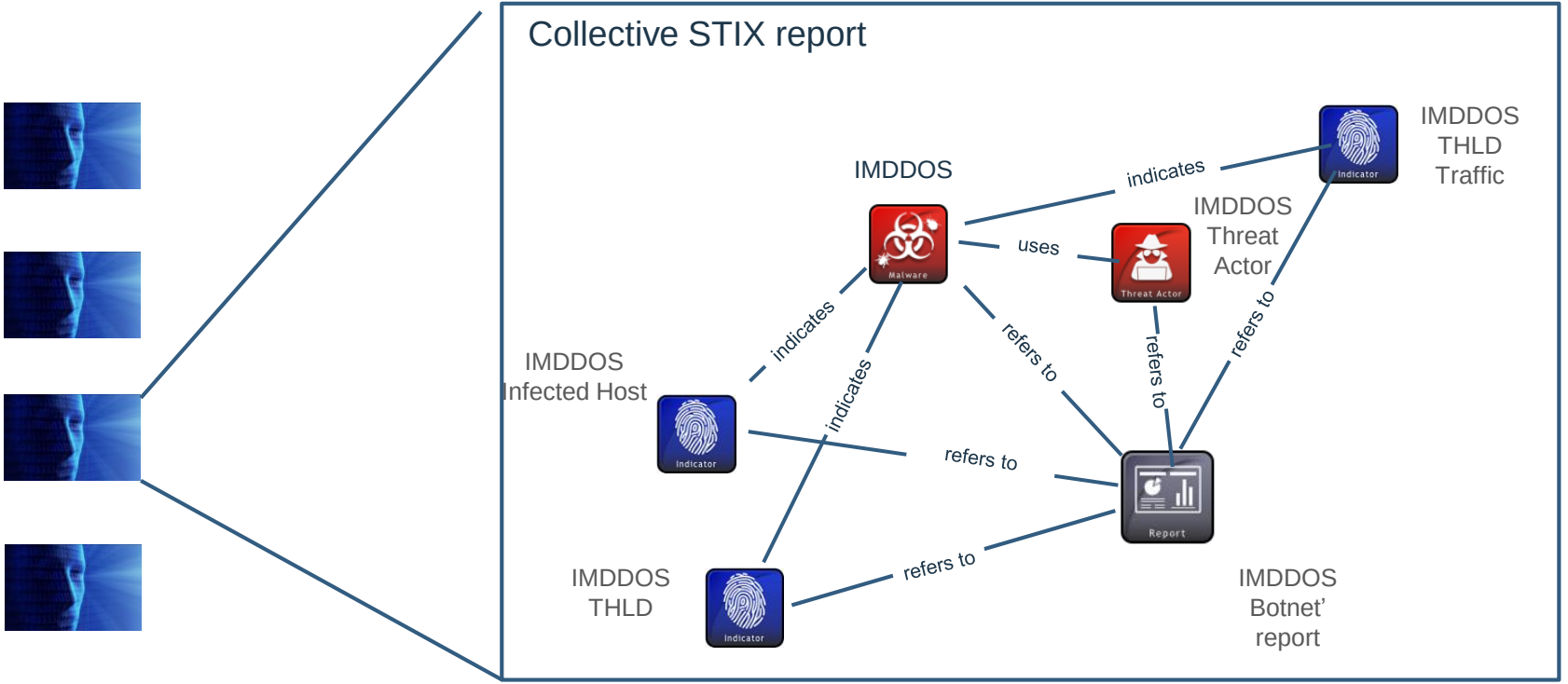


Different views according to trust level

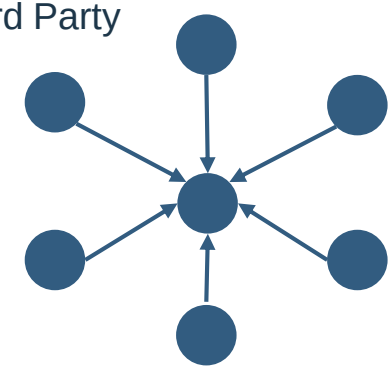
Current Barriers for Threat Sharing

(Source: NIST SP 800-150)

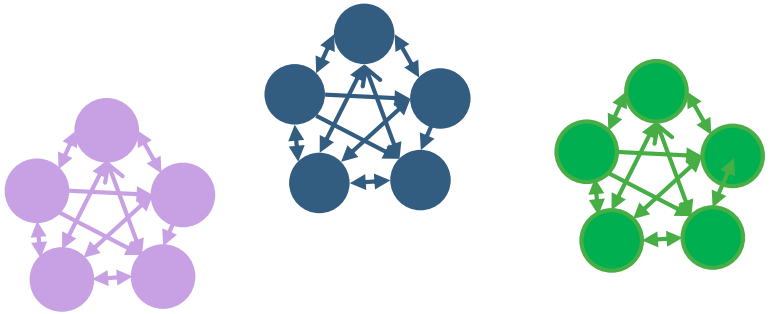
- Establishing **trust**
- Achieving **interoperability** and **automation**
- Safeguarding **sensitive info**
- Protecting **classified info**
- Enabling information **consumption** and **publication**

Threat Sharing Today: What are the Trust Models?

Model 1:
Trusted Third Party



Model 2:
Rely on Personal relationships

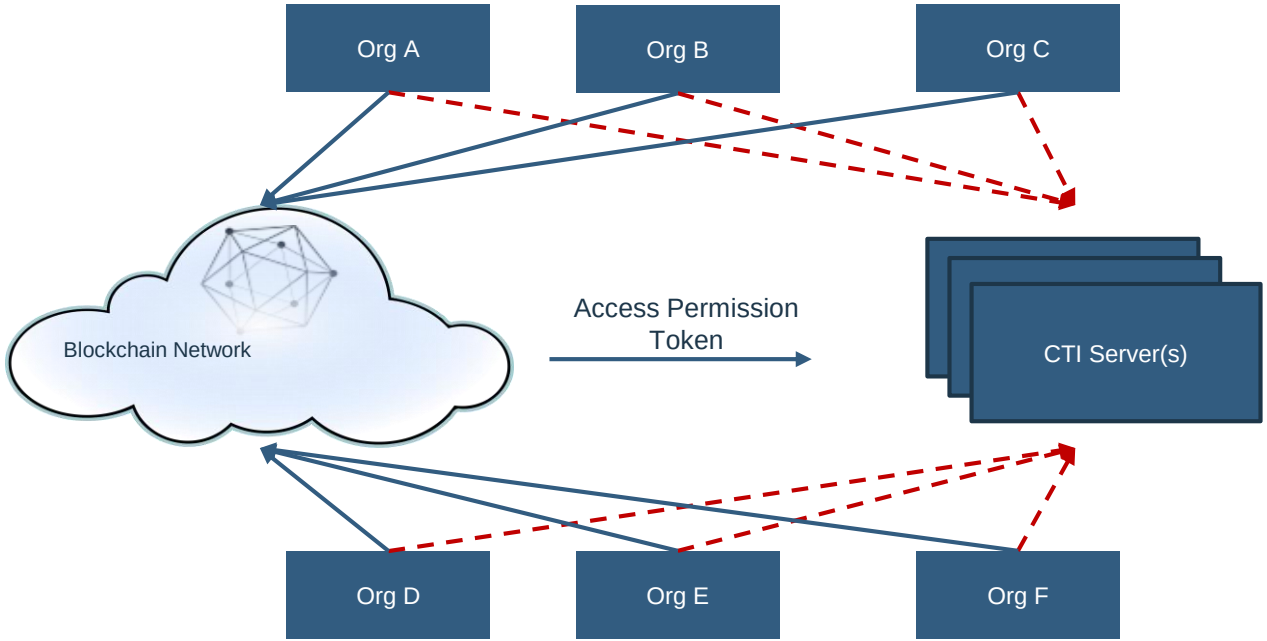


Why Blockchain

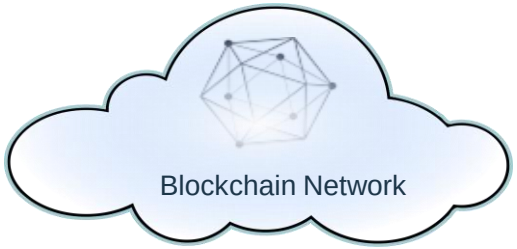
- Provides **anonymity** with **trust**
- **Enable dynamic** and **flexible** data exchange between any two organizations in the network
- Uses smart contracts to enforce data exchange agreement
- Automatic, objective and immutable audit of exchanged information
- Transparency

Our Approach

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

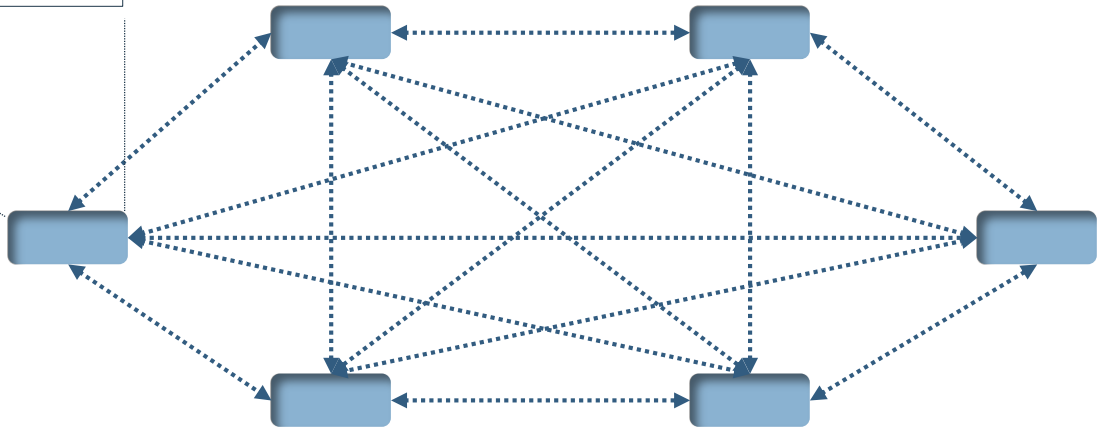


Our Approach



Org profile

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



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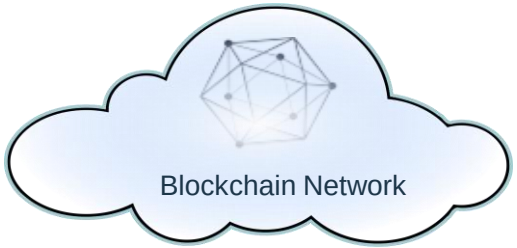
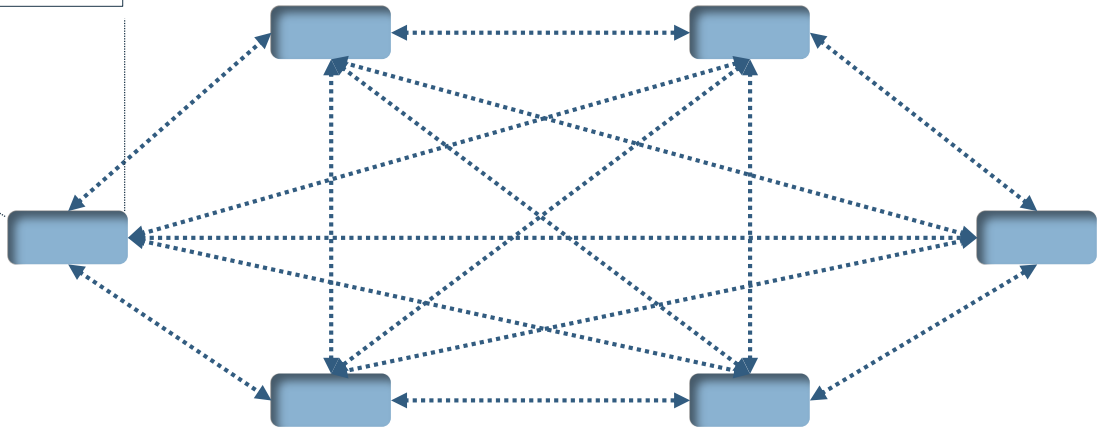


Consumption/ Sharing policy

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



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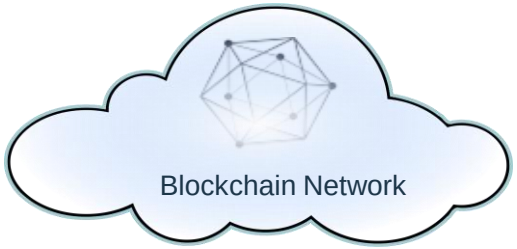
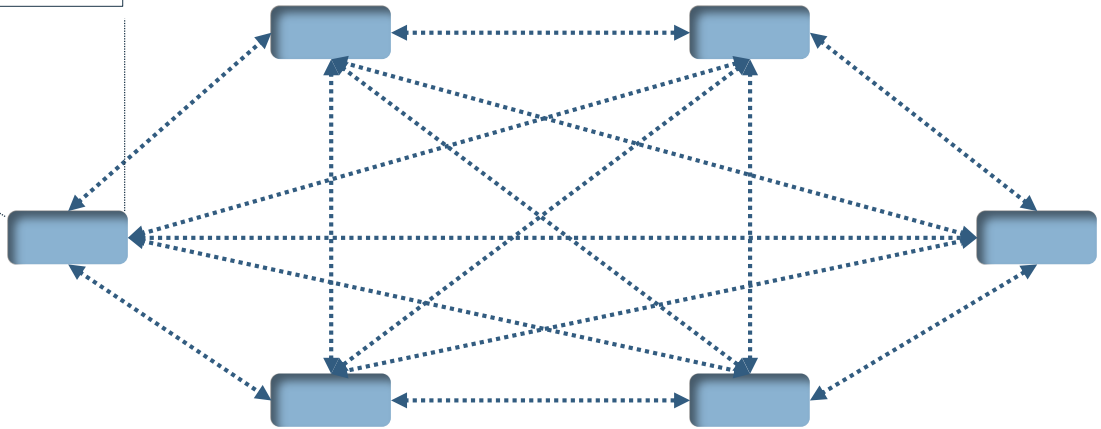


Consumption/ Sharing policy

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



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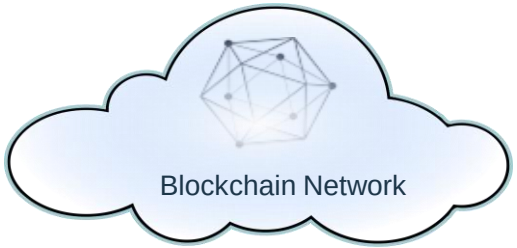
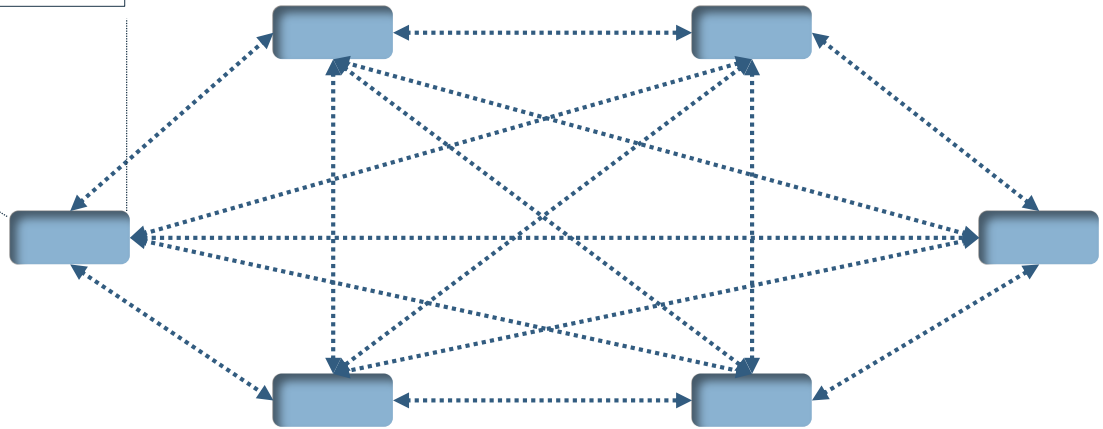


Consumption/ Sharing policy

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



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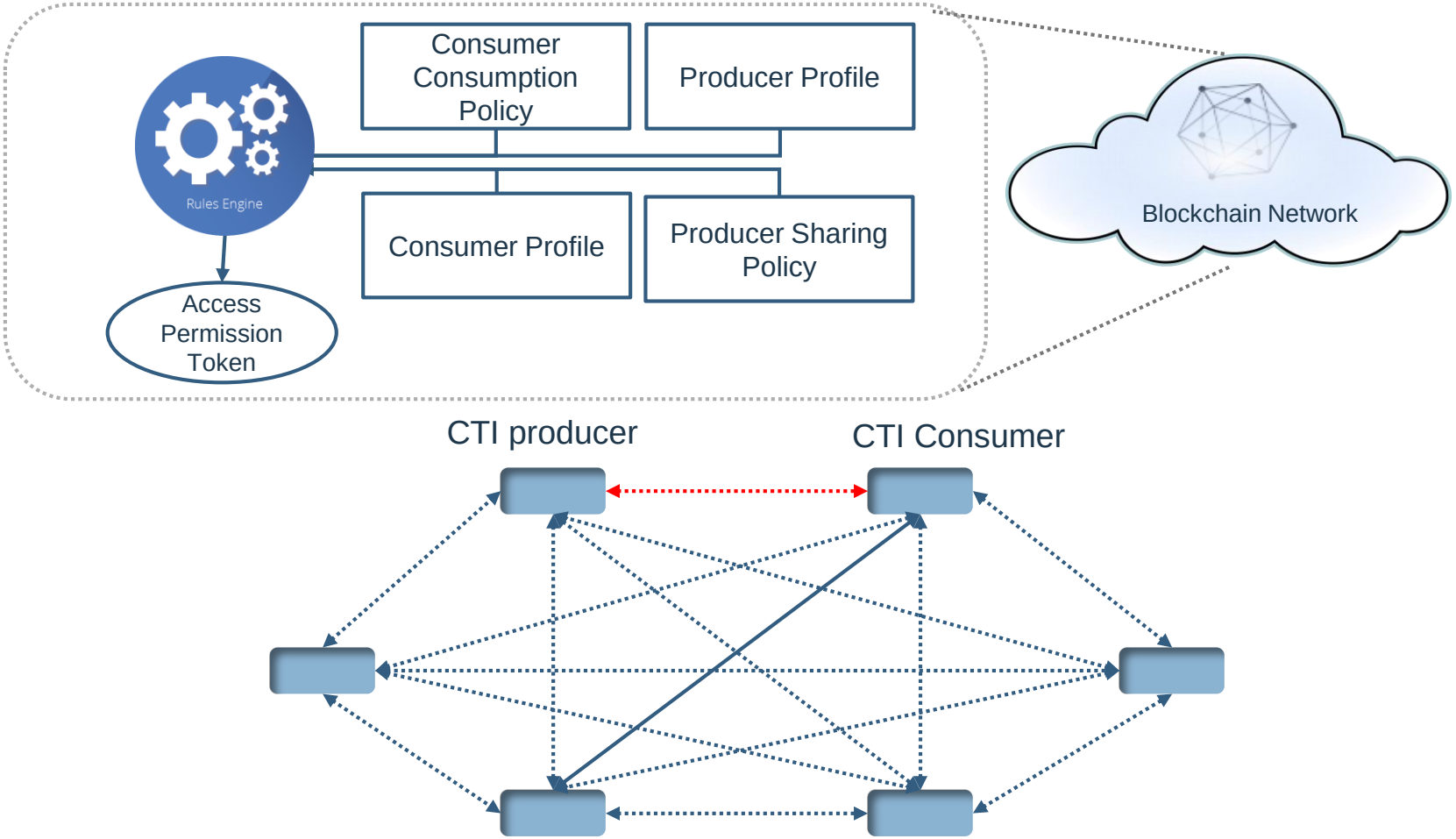

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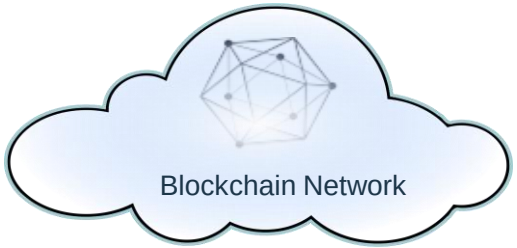

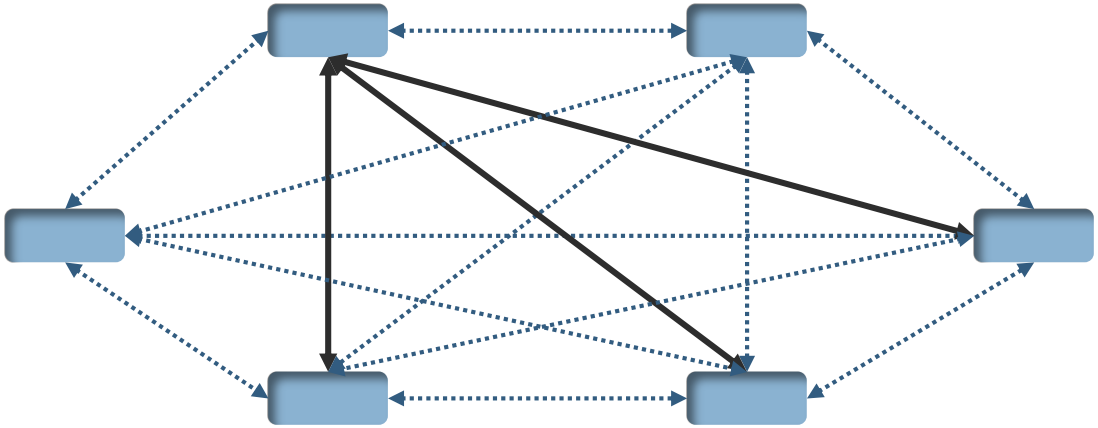

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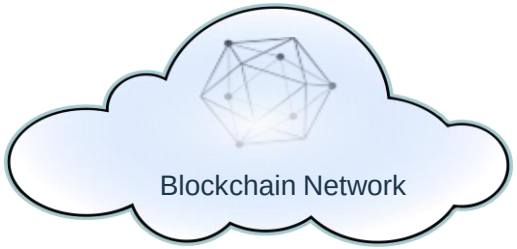

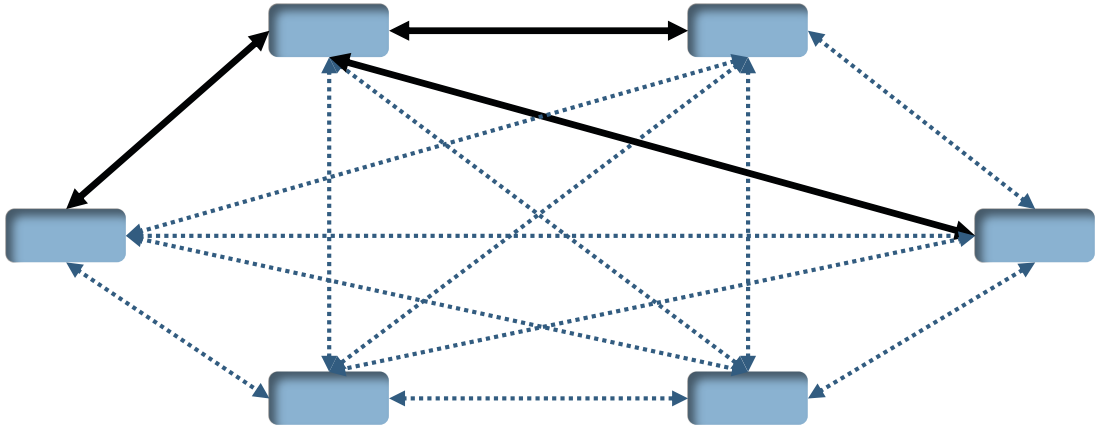

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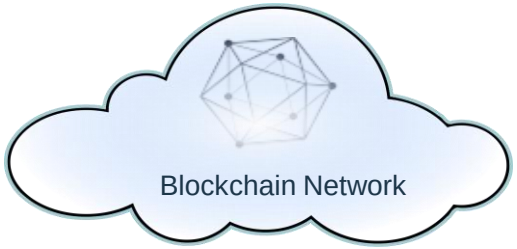

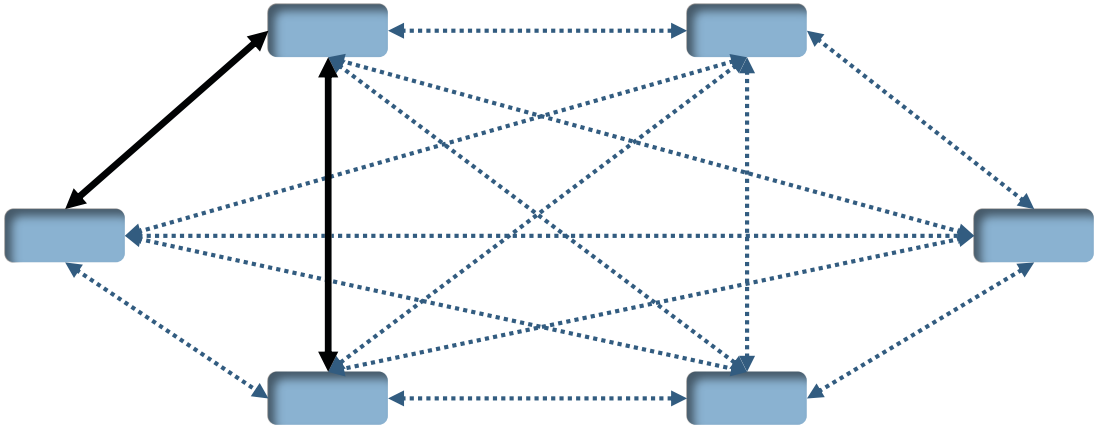

Summary: The Next Generation Threat Sharing Platform

- 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

Contact information: yair@il.ibm.com

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