Computer Network Security

TE - IT

Lecture -7
25/07/2022

Session: 12:00 - 1:00 PM

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Module-1

✓ Contents

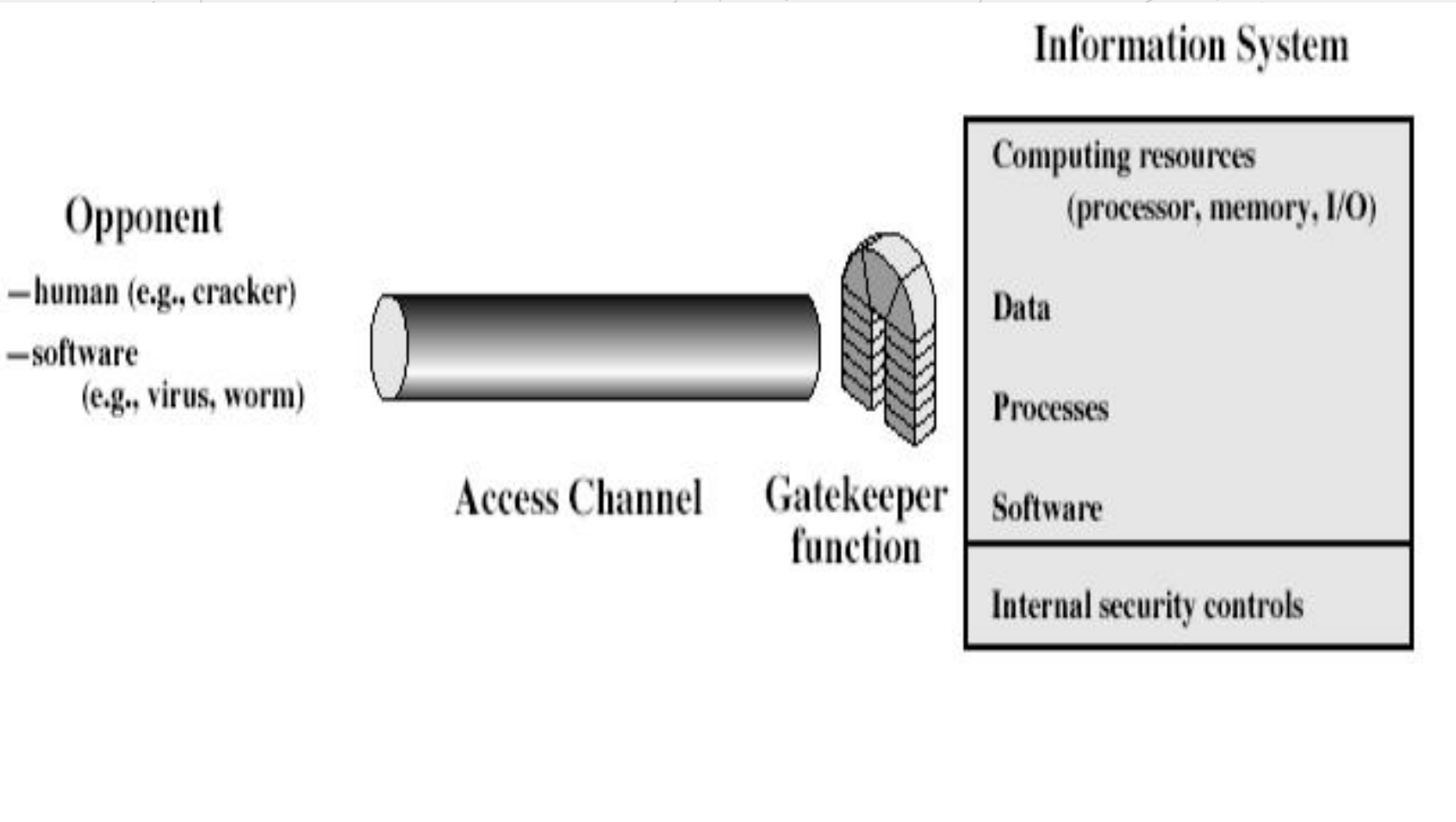
1. Network Security Model

3. Cryptography

Model for Network Security

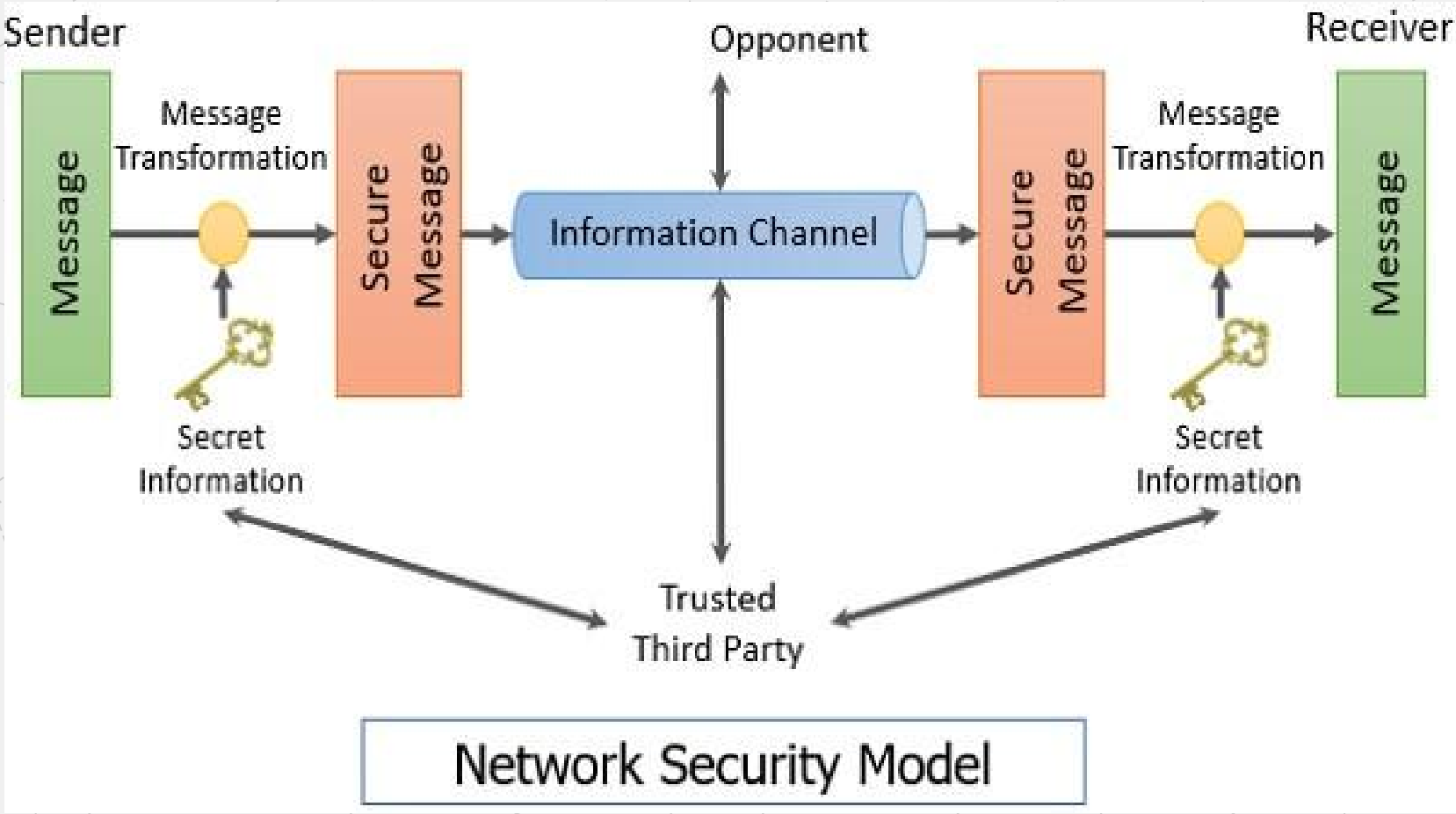
using this model requires us to:

- design a suitable algorithm for the security transformation
- generate the secret information (keys) used by the algorithm
- develop methods to distribute and share the secret information
- specify a protocol enabling the principals to use the transformation and secret information for a security service


Information System
Opponent
–human (e.g., cracker)
–software
(e.g., virus, worm)
Computing resources
(processor, memory, I/O)
Data
Processes
Software
Internal security controls
Access Channel
Gatekeeper function

Model for Network Access Security

- using this model requires us to:
  - select appropriate gatekeeper functions to identify users
  - implement security controls to ensure only authorised users access designated information or resources
- trusted computer systems can be used to implement this model


Sender
Opponent
Receiver
Message
Message Transformation
Secure Message
Information Channel
Secure Message
Message Transformation
Message
Secret Information
Secret Information
Trusted Third Party
Network Security Model

THANK YOU