Network Security System

Chapter One

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Understand Security Basics

- OSI model security architecture:
- Thread network. Thread **addresses the network layers of the** Open System Interconnection (OSI) model. The OSI model standardizes communication systems with the hardware and physical components at the bottom and applications at the top

- Attack: In particular, two types of attacks common to the OSI transport layer are **SYN floods and Smurf attacks**. In an SYN flood, an attacker initiates many connections to a server using a spoofed IP address, not waiting for a connection to finalize. Smurf attacks use malware to overload network resources

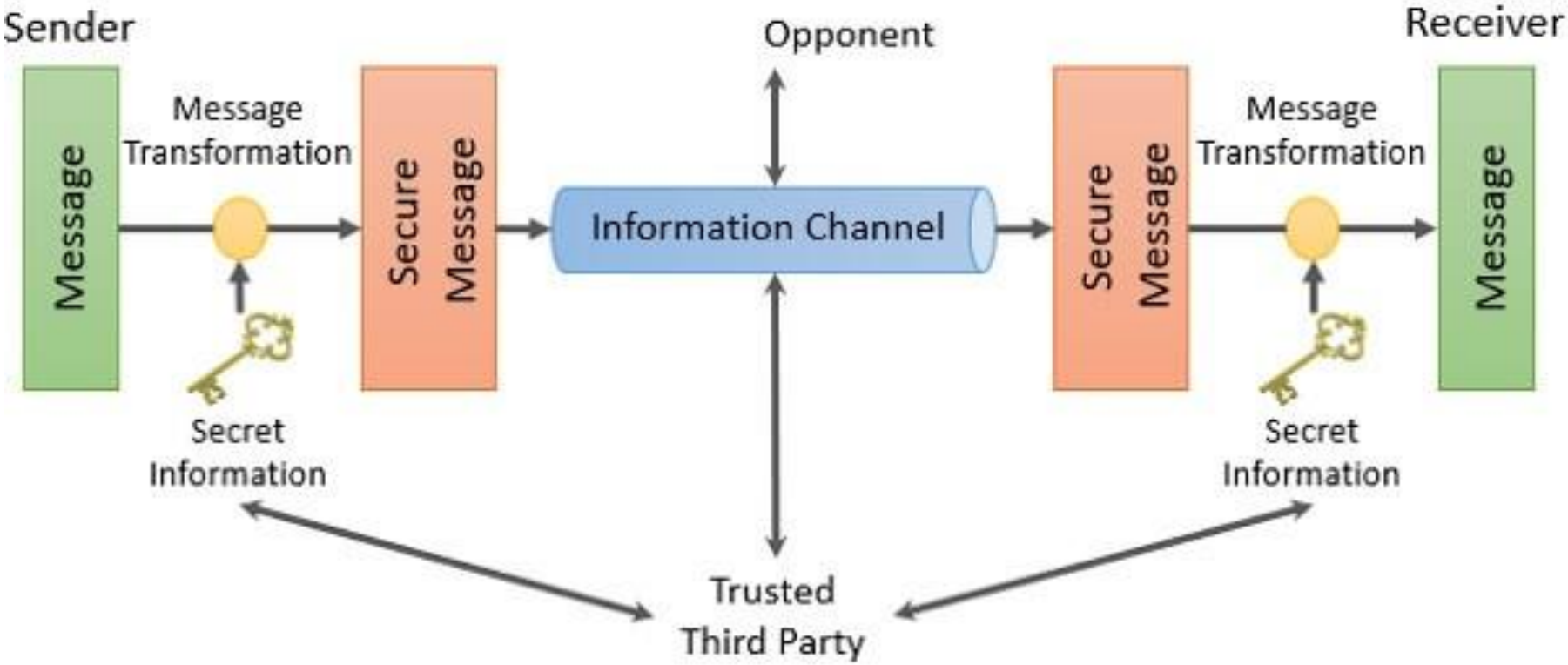
Model of network security

- When we send our data from source side to destination side we have to use some transfer method like the internet or any other communication channel by which we are able to send our message. The two parties, who are the principals in this transaction, must cooperate for the exchange to take place. When the transfer of data happened from one source to another source some logical information channel is established between them by defining a route through the internet from source to destination and by the cooperative use of communication protocols (e.g., TCP/IP) by the two principals.
- When we use the protocol for this logical information channel the main aspect security has come. who may present a threat to confidentiality, authenticity, and so on. All the technique for providing security have to components:

- A security-related transformation on the information to be sent.
- Some secret information shared by the two principals and, it is hoped, unknown to the opponent.

- A trusted third party may be needed to achieve secure transmission. For example, a third party may be responsible for distributing the secret information to the two principals while keeping it from any opponent. Or a third party may be needed to arbitrate disputes between the two principals concerning the authenticity of a message transmission.
- This model shows that there are four basic tasks in designing a particular security service:

- Design an algorithm for performing the security-related transformation.
- Generate the secret information to be used with the algorithm.
- Develop methods for the distribution and sharing of secret information.
- Specify a protocol to be used by the two principals that make use of the security algorithm and the secret information to achieve a particular security service.



Network Security Model