

Introduction to Computer and Network Security

2 Security and Privacy Overview

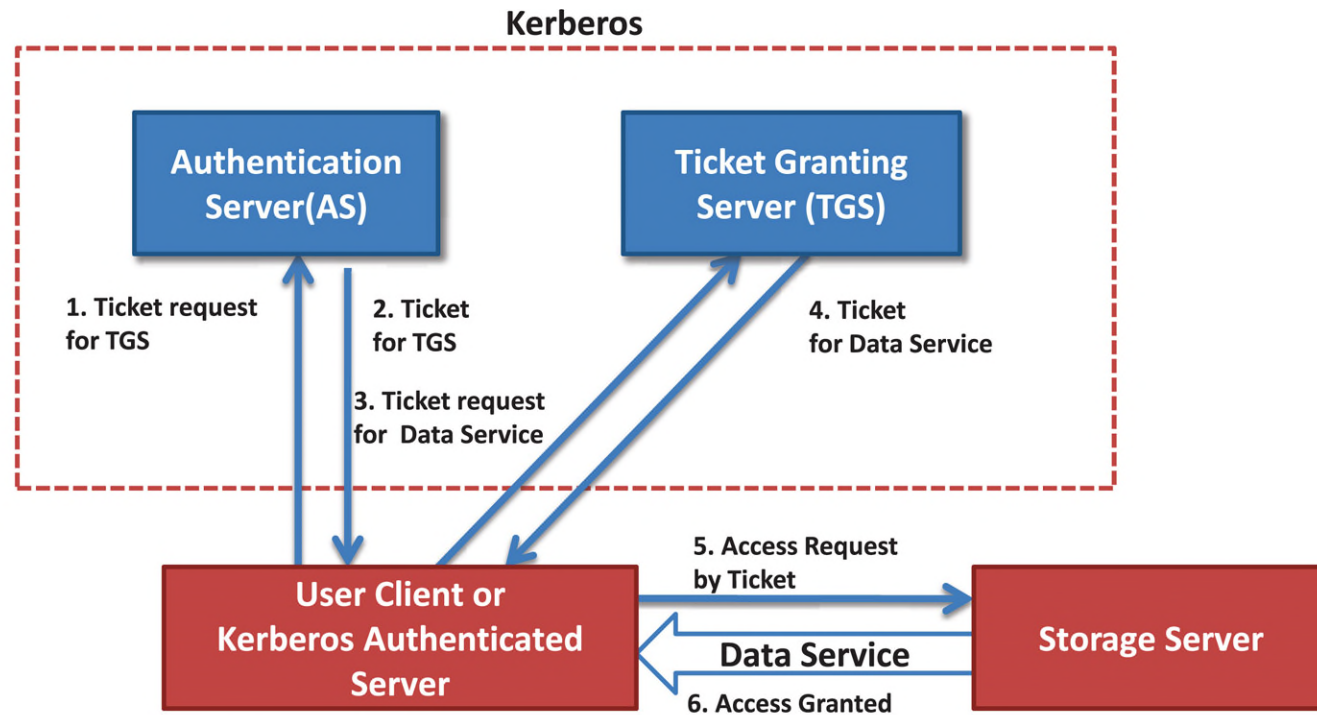


FIGURE 2.1
The Kerberos authentication process.

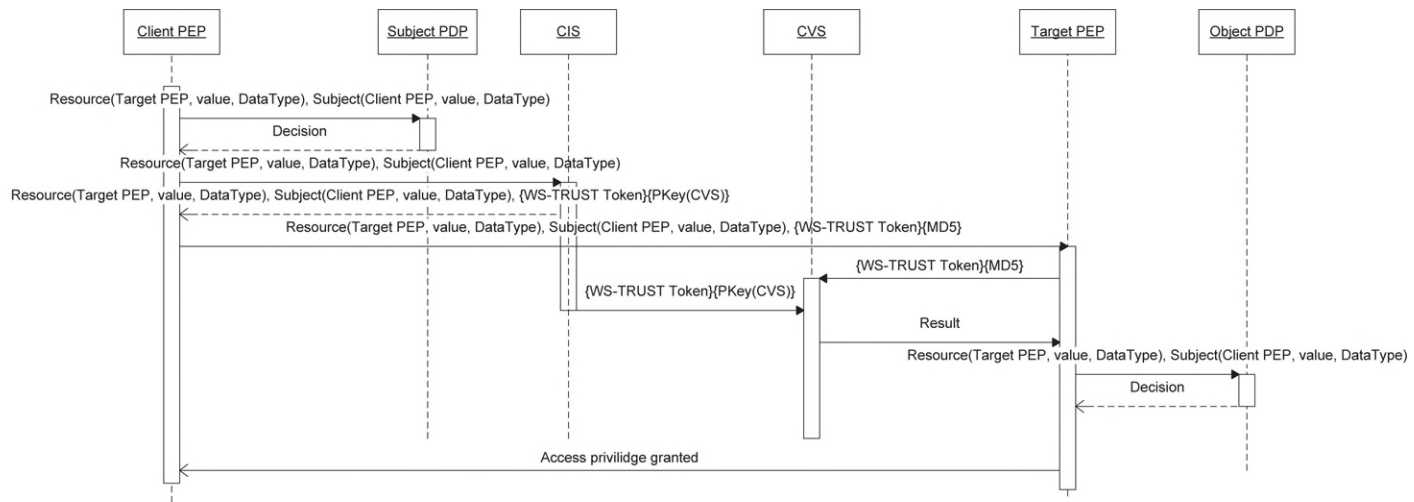


FIGURE 2.2
PERMIS security protocol sequence diagram.

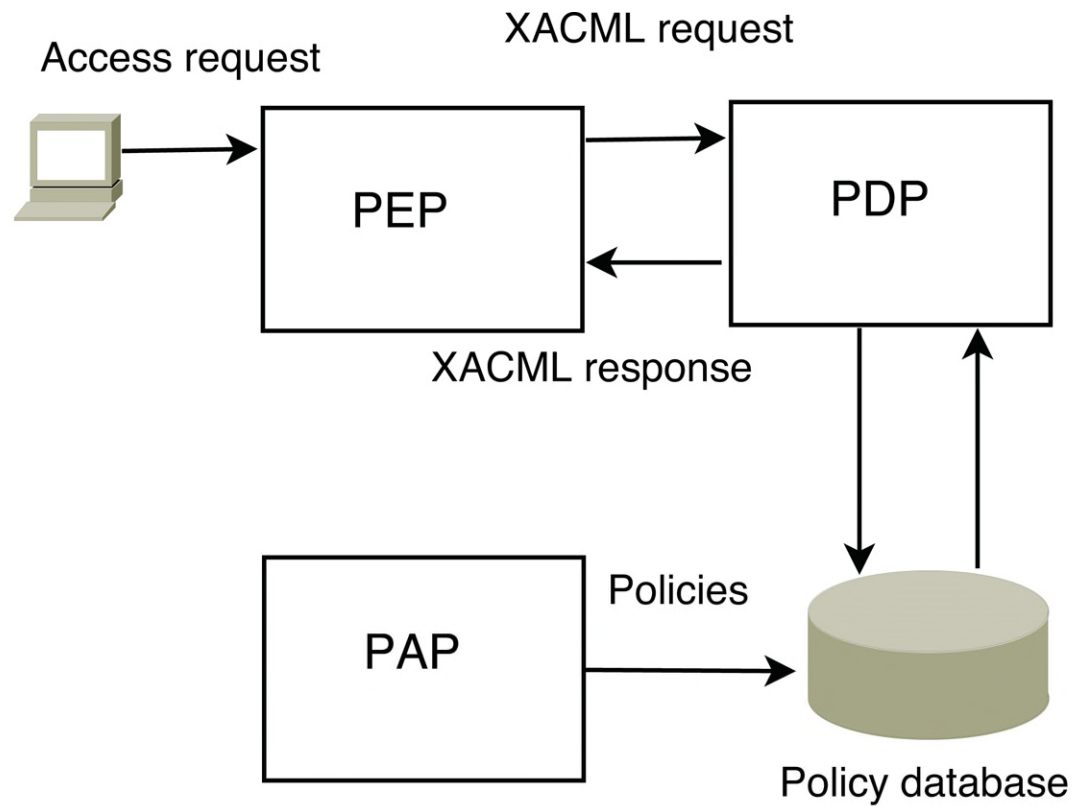


FIGURE 2.3

A user submits an access request to the Policy Enforcement Point (PEP). The PEP sends an XACML request to the Policy Decision Point (PDP). The PDP evaluates the request using a policy database maintained by the Policy Administration Point (PAP) to decide whether or not access should be allowed.

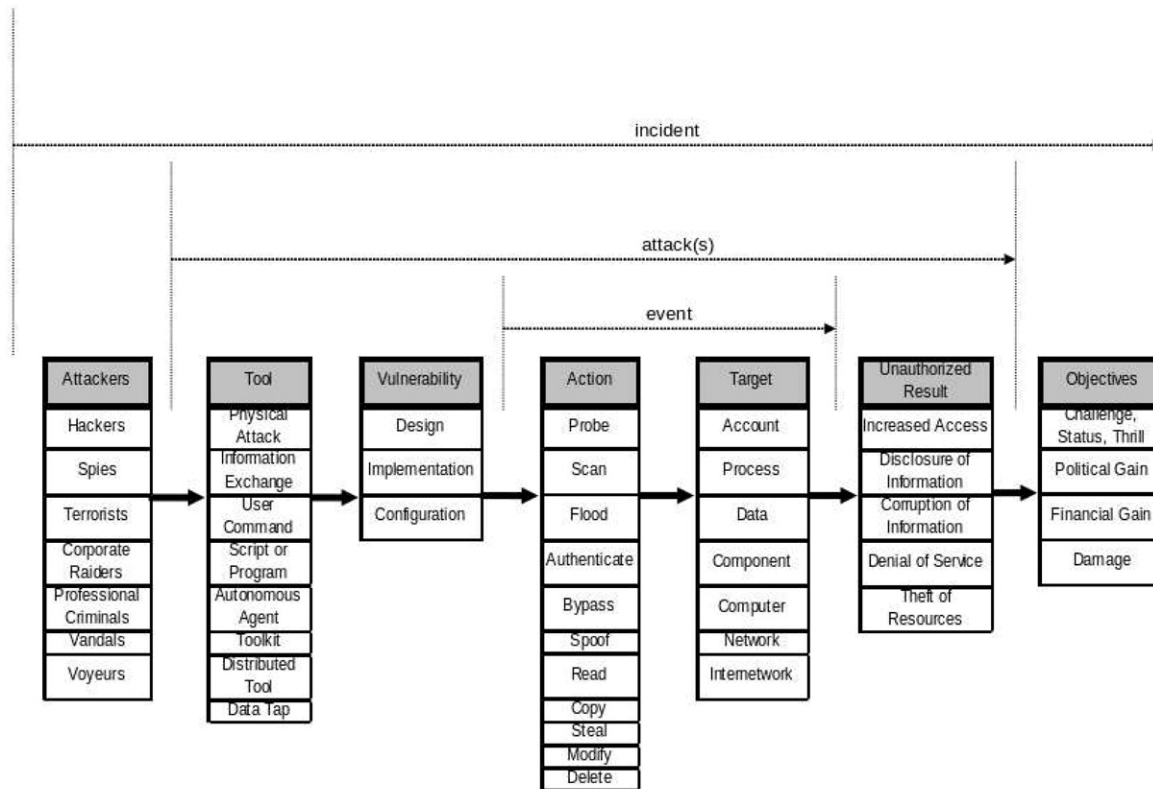


FIGURE 2.4

Taxonomy of security incidents used by the Carnegie Mellon Computer Emergency Response Team (CERT) [210].

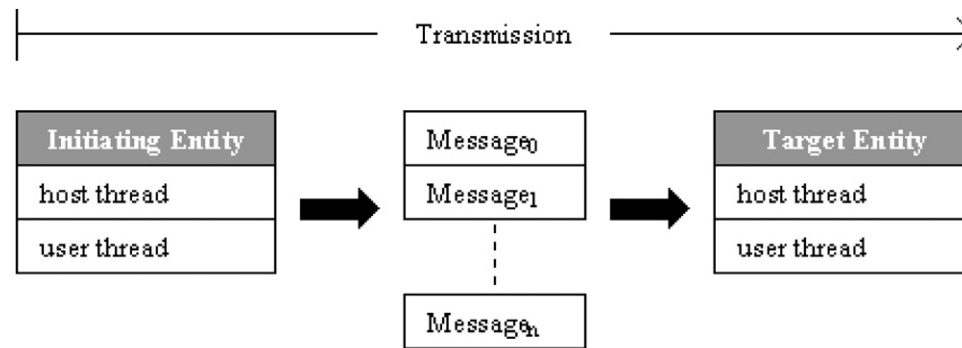


FIGURE 2.5

A transmission is a set of message exchanges.

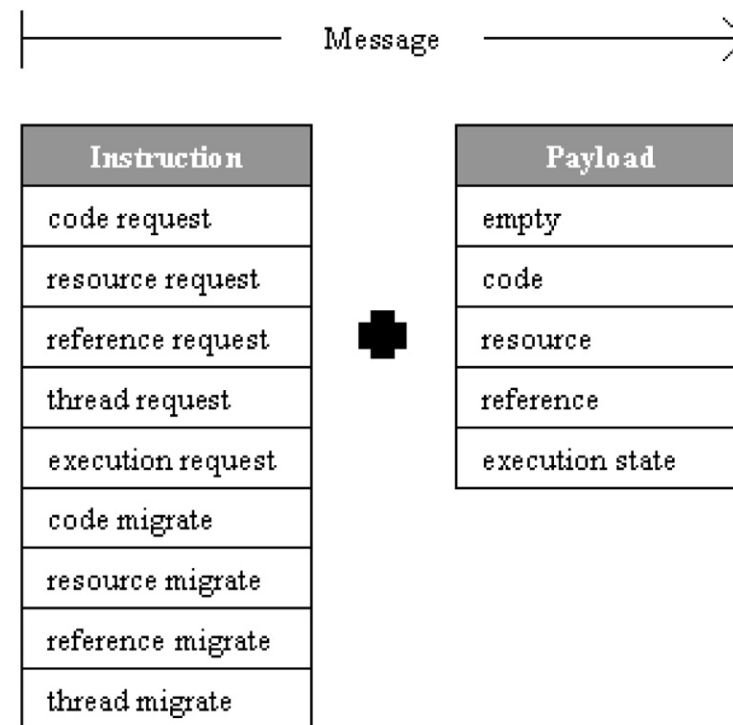


FIGURE 2.6

A message has an instruction and a payload.

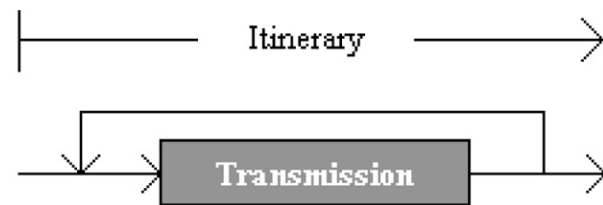


FIGURE 2.7

An itinerary is a set of transmissions.

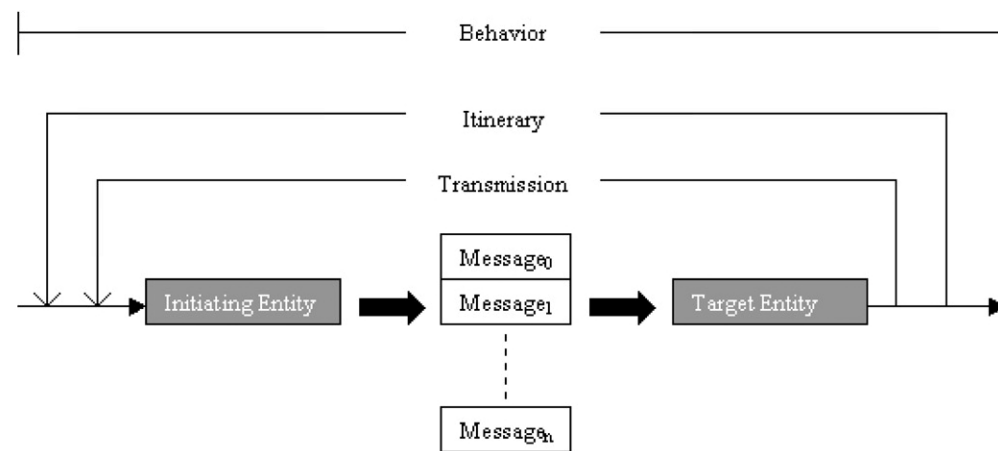


FIGURE 2.8

A behavior is a set of itineraries defining a complex network activity.

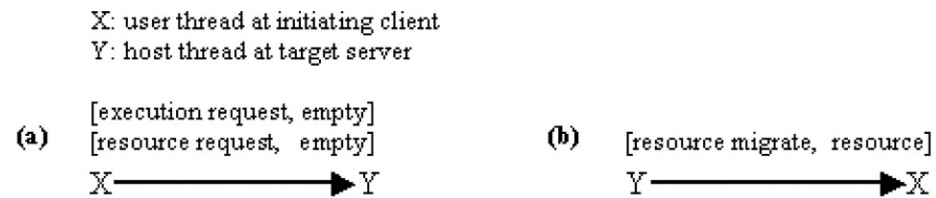


FIGURE 2.9

Remote evaluation transmits a program for remote execution.

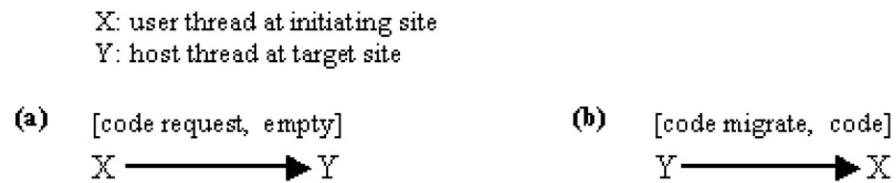


FIGURE 2.10

Code on demand downloads a program for local execution.

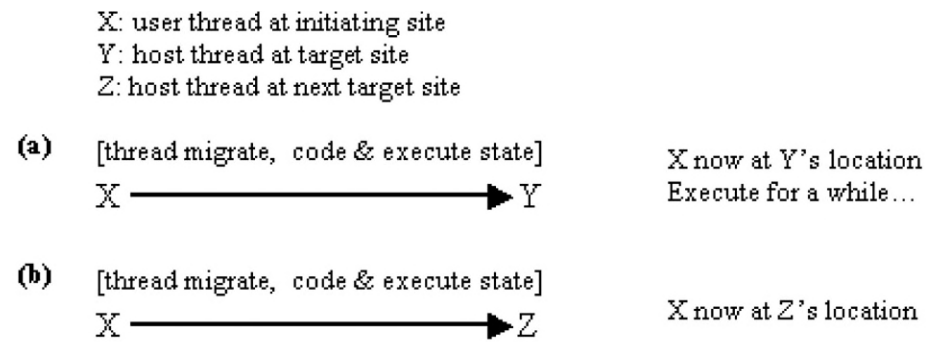


FIGURE 2.11

Agent migrates from node to node under its own volition.

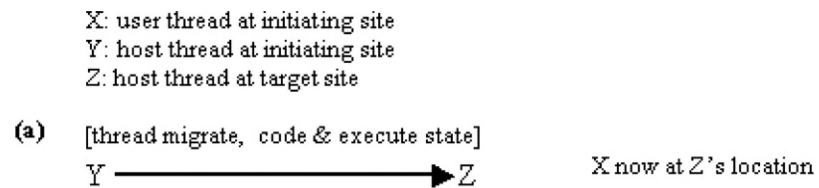


FIGURE 2.12

Process migration allows hosts to move programs to other nodes.

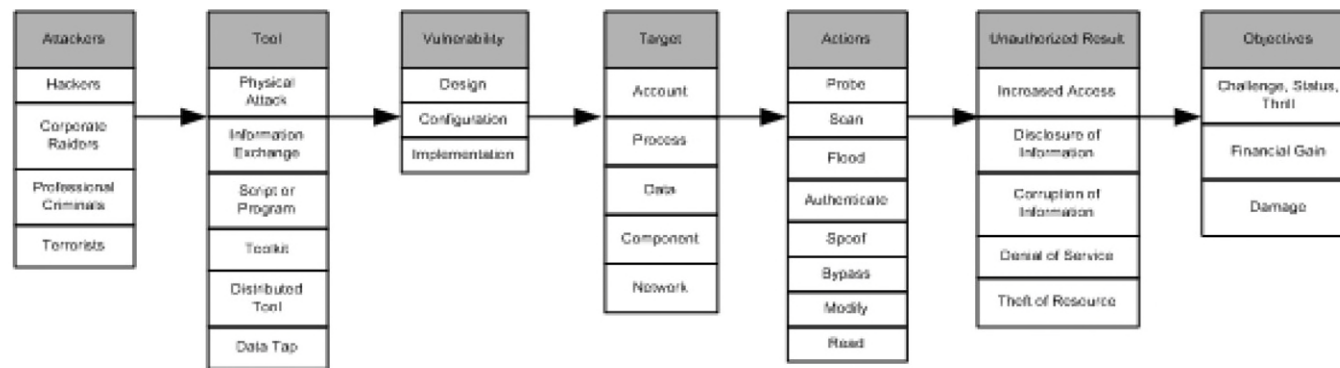


FIGURE 2.13
Modified attack taxonomy.