Internet Security

- Internet is a great tool to access world-wide information and to publish information
- Internet is also a major danger to pollute and destroy information.

Issues:

- What are you trying to protect?
- What are you trying to protect against?
- How can you protect your site?
- What is an Internet firewall?

What are You Trying to Protect?

- Your data (information you keep in computer)
  - secrecy
  - integrity (資料完整性)
  - Availability
- Your resources (the computers themselves)
  - computing power
  - memory space
- Your reputation

What are You Trying to Protect Against?

- ● Types of Attacks
  - – Intrusion
    - ► social engineering, simple guesswork, break-in w/o passwords.
  - – Denial of Service
  - – Information Theft
- ● Types of Attackers
  - – Joyriders, Vandals, Score Keepers, Spies
- ● Stupidity and Accidents

How Can You Protect Your Site?

- No Security

- Security Through Obscurity (默默無聞)

- Host Security (restricted to small site)

- Network Security (firewalls)

- No Security Model can do it all

Security Strategies

- Least Privileges

- Defense Indepth (not just one key)

- Choke Point (for easier monitoring)

- Weakest Link (know your weakest point)

- Fail-Safe Stance (if fail, will fail to access.)
  - Default Deny Stance (沒有許可者拒絕)
  - Default Permit Stance (沒有拒絕者許可)

- Diversity of Defense (different security systems)

- Simplicity