

Topic 3: Networks

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Extranet

Description

A network which connects clients outside an organization to its intranet through the Internet in a controlled manner.

Implementation Requirements

- Virtual private network, encryption, firewall and authentication.
- A connection between client and organization (typically, the Internet).

Advantages

- Secure and reliable exchange of information.
- Private hosting of exclusive data.
- Provide specialized services to certain clients.
- Collaboration between different organizations.

Disadvantages

- Extra security required since connecting to the Internet – more powerful hardware and better firewall setup required.
- Breaks if connection cannot be made (i.e. Internet connectivity problems on either side).

Criteria for Suitability

- Internal network of organization needs to be accessed by third party.
- Organization wants to share data or provide exclusive services to certain clients.

Unsuitable Cases

- Intranet does not have appropriate authentication and privilege systems in place.
- Unable or unsuitable to connect to the Internet (incompatible infrastructure or insufficient security).

References

Eisenhauer, T. *Intranets VS Extranets - What's the difference?*. Axero Solutions.

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Extranet Overview. Tutorialspoint. Retrieved 23 March 2017, from https://www.tutorialspoint.com/internet_technologies/extranet_overview.htm

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Personal Area Network

Description

A network which connects closeby personal devices (e.g. cellphones, headphones, laptops, etc.) of an individual person.

Implementation Requirements

- Typically wireless (Wi-Fi or Bluetooth).
- Software varies depending on type of device.

Advantages

- Fast and direct connection among devices.
- Very little overhead – suitable for low-performance devices.
- Simple setup; no complex user/privilege management.

Disadvantages

- Devices must be closeby.
- Devices must be owned by a single individual; not shared or publicly used.
- Devices vulnerable to attacks if security measures (e.g. authentication) are not taken.

Criteria for Suitability

- Connecting personal devices such that they can intercommunicate and are interoperable.

Unsuitable Cases

- Devices which need to be connected are far apart (>10 m).

References

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