# IoT Network Threats and Security Risks Challenges in Real-World!

**Introduction:**

The Internet of Things refers to the process of connecting physical things to the internet for the purpose of transferring and receiving data. Simply we can say IOT refers to the connecting of electronic and software systems via sensors for data transfer.

**Importance of IOT:**

Nowadays the data is increasing, so transferring and receiving the data manually i.e. with human interaction is very difficult. The chances of getting errors are more and the data processing takes time. So transferring data over a network will reduce human interaction and the speed of sending or receiving data is high.

**Network Threats and Security risks:**

**Issues on designing the IOT components and environment:**

In the design phase of Cisco 7 layer IOT reference model, one of the major vulnerabilities is lack of significant effort to secure the layers. All parts of IoT systems, including network services, Web API’s, updating mechanisms and data in transit, and so on, require more protection. Using unsecure products may cause more risk and that can be avoided by using proper IoT components.

**Lack of Physical security:**

Even all the Internet services are often placed in secure data centers with segregated physical access, biometrics, and a variety of other physical security measures, a large amount of IoT components are physically accessible to not only consumers but also hackers. To solve this issue a deliberate effort is necessary.

**Security issues:**

* The first layer of the reference model is connectivity of physical devices and these device connections are public so the vulnerabilities are more for attacking.
* In the communication layer also security issues are more because the medium of communication is happening through Internet.
* In the data extraction phase there are more chances for system corruption and bugs.
* Usually IOT devices are integrated with third party API’s which makes them too vulnerable to hack if there is any backdoor vulnerability.

# References

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