

## **Unit 12: Debate on the Future of the Internet**

### **Objectives:**

- Review the options for the future Internet architecture.
- Debate the future of the Internet.
- Vote on the most popular option (as presented in the debate) that should be adopted.

### **Outcomes:**

- Describe several potential future Internet architectures.
- Argue for and against several architectures.
- Reflect on the role of Information Security Management in modern computing solutions.

This unit brings together various threads and trends that have been raised in previous units and discusses several possible security mitigations and solutions.

### **Reflection:**

The internet's rapid expansion over the past two decades has made it a part of each facet of modernity. The internet is becoming, in the opinion of Bill Gates, "the town square for the global community of the future," serving as a platform for everything from mobile entertainment to healthcare. There is an exciting new period about to begin, one in which online functionality will permeate the physical world, affecting the items and settings in which we live. However, due to this, the intricacies of organizations, such as governance, are brought into the real world (Lee, X. 2014).

ARPANET, a network developed by the US Defense Department in the 1960s, was the beginning of the Web, although no one understood how big it would grow until 2014. The Internet is a system that connects multiple computers to exchange data. Since 1989, Tim Berners-Lee has been credited with inventing HTTP) Moreover, making the very first strong link between a server and client via the Internet. It has rained sites on us ever since, and we have been exposed to everything from browsers to social media to e-commerce to cell devices. It may appear to be malicious software, but today, the Internet has engulfed our era and positively and negatively impacted our lives. We cannot predict what the Internet will be like in the future because it continues to astound us with its previously unimaginable powers.

Now that cloud computing is the latest on the world wide web, businesses like Amazon, Microsoft, and Apple are working hard to make internet services more accurate and efficient. Using the analogy of a hard drive in our computer, we may conceive cloud storage as a service that allows us to keep data online (the cloud). As opposed to C discs, which we save on our computers and can only retrieve from there, Data Centers (aka "Cloud Storage") keep and preserve your information. However, the benefit of this store

is that you may access it from any location with an internet connection and your account id and passcode, so long as you can memorize them.

### **Conclusion:**

Cloud computing is an important new paradigm for large-scale applications and databases, efficient, resilient, and always-on. In addition, cloud resources can be scaled up or down as needed. Institutions and companies alike can profit from the use of the cloud. As far as security is concerned, there are some issues. It is an evolving architecture needed to expand the Net, becoming the computing platform of the long term.

### **References**

Alabdulhadi, F. (n.d.). *Information Security and Privacy in the Cloud of Healthcare Information Security and Privacy in the Cloud of Healthcare Sector, and The Use of Miter Att&ck Framework to Keep the Sector, and The Use of Miter Att&ck Framework to Keep the Healthcare Secure Healthcare Secure*. [online] Available at: [https://repository.stcloudstate.edu/cgi/viewcontent.cgi?article=1164&context=msia\\_etds](https://repository.stcloudstate.edu/cgi/viewcontent.cgi?article=1164&context=msia_etds) [Accessed 10 May 2022].

Lee, X. (2014). *What will the future of the internet look like?* [online] World Economic Forum. Available at: <https://www.weforum.org/agenda/2014/11/what-will-the-future-of-the-internet-look-like/> [Accessed 22 May 2022].

Wilson, D.C. (2021). *Cybersecurity*. [online] Google Books. MIT Press. Available at: <https://books.google.com/books?hl=en&lr=&id=BuY9EAAQBAJ&oi=fnd&pg=PP9&dq=Misconfiguration+proliferation+Perhaps+the+least+glamorous+of+all+security+threats> [Accessed 10 May 2022].

Yaacoub, J.-P.A., Salman, O., Noura, H.N., Kaaniche, N., Chehab, A. and Malli, M. (2020). Cyber-physical systems security: Limitations, issues and future trends. *Microprocessors and Microsystems*, 77, p.103201. doi:10.1016/j.micpro.2020.103201.

Yeng, P.K., Nweke, L.O., Woldaregay, A.Z., Yang, B. and Snekenes, E.A. (2020). Data-Driven and Artificial Intelligence (AI) Approach for Modelling and Analyzing Healthcare Security Practice: A Systematic Review. *Advances in Intelligent Systems and Computing*, pp.1–18. doi:10.1007/978-3-030-55180-3\_1.