



Seven IT Trends – Summer 2021

The list below summarizes seven IT trends discussed by the National CTC's BILT (Business and Industry Leadership Team) at the May 2021 and August 2021 web meetings. The purpose of these "trend talks" is to keep faculty – and their students – informed on the ever-evolving IT landscape.

1. Cybersecurity is essential – In today's IT culture it's "security first." Previously, IT put all of the security burden on cybersecurity teams. It was their job to secure everything. But now, security is baked into everything. The entire IT group now must have the knowledge and ability to secure the network. One of the newer trends involves "zero trust" – the idea of "if you're inside the network, you're trusted" is no longer true.

Learn more: <https://www.crowdstrike.com/cybersecurity-101/zero-trust-security/>

2. IT workers need to understand their company's goals – Students should understand the importance of "paying attention" to business goals. Know what your employer is trying to do. Technicians often want to work on the shiny object and tend to "overengineer" a solution that may not align with the business goals or address business needs.

Learn more: <https://www.bmc.com/blogs/it-business-alignment/>

3. For now, AWS is king of cloud providers – Even so, rather than teaching user interfaces, students should perhaps instead learn the infrastructure fundamentals of data centers and virtualization. Note also that Ethereum – which uses blockchain technology for cloud computing and cloud databases – may soon upend AWS, Azure, and Google.

Learn more: <https://medium.com/@dillonvincent/ethereum-vs-aws-what-amazon-wont-say-out-loud-ff037e6c844c>

4. Some companies are moving out of the cloud and back into traditional data centers – Businesses are realizing that cloud computing is expensive. Many programs and projects have been paying for underutilized cloud services. As a result, they're either combining virtual machines in the cloud or bringing data centers back "in house" as hyperconverged technology with tightly integrated networking capabilities.

Learn more: <https://www.forbes.com/sites/peterbendorsamuel/2021/08/10/why-is-cloud-migration-reversing-from-public-to-on-premises-private-clouds/?sh=d5efa8263cc1>

5. Understanding the OSI model is critical – OSI layers are key to the basic understanding of what networks are. A CIO noted that he still today uses his knowledge of OSI layers.

Learn more: <https://learningnetwork.cisco.com/s/article/osi-model-reference-chart>

6. Applications of blockchain are increasing – This is no longer an emerging trend. Students should understand the basics of blockchain and cryptocurrency. Blockchain allows for immutable smart ledgers and smart contracts.

Learn more: https://nationalctc.nationalctcwiki.org/media/blockchain_crypto_tt_minutes_july_2021.pdf

7. Employability "soft" skills remain important – Interpersonal skills (problem-solving, critical thinking, innovation, collaboration and teamwork) aren't as easy to teach on the job as "hard" technical skills. Students need to cultivate those early.

Learn more: <https://www.comptia.org/career-change/exploring-it/skills-for-it>

For a deeper dive into these topics and others, download the May 2021 and August 2021 BILT meeting minutes, which can be accessed for free here: <https://nationalctc.nationalctcwiki.org/bilt>.