# Transcript: WGU IT AUDIO series

*The following transcript is a verbatim account of the video or audio file accompanying this transcript.*

Speaker 1:

[MUSIC PLAYING] WGU’s IT audio series. Flexible, portable, profound.

Speaker 2 (Dave Hoff):

Hey, folks. Dave Hoff here. I'm an associate Dean of the College of IT and the director of the network programs, which is network operations and security and network engineering and security here at WGU. One question that I get asked a lot is how is network engineering and security different than cloud engineering or cybersecurity. And that's a great question that's more complex to answer than it seems.

The reason that this is a tough one to nail down is that there are many similarities and overlaps between these programs. So trying to precisely define the differences is a bit of a challenge. In simple terms, network engineers design, build, and maintain the physical networks the data travels on. These networks are generally owned and managed by the companies that they're designed and built for.

Cloud engineers build and maintain shared physical and virtual networks and services that users rent or lease. And then security professionals are there to ensure that the data that lives in traverses on these networks is secure using the CIA triad as their guiding principle. One familiar way to think about this is if we look at the building and construction industry.

Network engineers are like custom home builders or developers. They excel at designing and building the perfect home for each customer and also in incorporating it perfectly into the landscape and into the neighborhood. In many residential developments, there are a lot of perfect homes and each one can be highly customized while also sharing some characteristics like color and material palettes, access to utilities, adherence to building code, maybe a shared community center or swimming pool, easy access to retail establishments. And some communities are gated and some might share an HOA.

Similarly, network engineers excel in building highly customized, secure and functional networks for the organizations that they work for that also integrate into broader networks. Cloud engineers are also builders, but they're not building residential homes. Rather, they're building hotels and apartments and office buildings. These buildings also share engineering standards and tenets in these buildings share services like elevators, climate control, retail, dining, workout facilities, and other infrastructure.

But the actual living and working spaces are nearly identical from unit to unit. In fact, standardization in hotels is a key to efficiency. Every room's the same, but they're built within an infrastructure wrapper. Standardization and ubiquitous availability are the keys to scalability and efficiency for cloud engineers as well, not building custom network solutions like the network engineers excel at.

Finally, we have our security professionals. In our building model, they're the regulators, the HOA, the building inspectors, and the security desk folks who protect the entryways, monitor security video feeds, and who patrol their rounds looking for burglars, open doors that should be shut, and other evidence that the building has been breached. These are also the folks who have developed evacuation in active shooter plans and who run the fire drills and who test all of the locked doors and windows periodically to make sure that they work as designed. They also monitor the alarms and have escalation and communication plans for how to react to incidents.

In most organizations, folks work predominantly either in an office or increasingly at a home office. But there's also the business traveler, the professional who may be based in a fixed location but who also travels to hotels or to other office buildings. This is our hybrid user and it's where things get cloudy. See what I did there?

All IT domains are professions converge at some point in order to meet the ends of the users. Most companies operate in some sort of hybrid fashion where they own and maintain some of their own technology like their internal networks, servers, maybe critical enterprise and operation resources. Well, they also interface with other third party providers, perhaps for payroll, data storage and backup, and other business continuity services. All IT professionals also have to integrate the appropriate security into their products that they build and maintain.

At the end of the day, network engineers are the folks who design, build, secure, and maintain the networks that traffic data securely. These networks might be private or they may be hybrid or they might be the networks that directly support delivering cloud services. In all cases, the network engineer is a central figure in the critical operations of an organization.

Regardless of what your professional goals are, WGU and the College of IT are here to ensure that you are ready to hit the ground running. We have a comprehensive set of degree options that will prepare you for success in almost any IT field. Of course, I hope that you'll join us in the pursuit of your network engineering and security degree. But rest assured, whether you're the next Frank Lloyd Wright or the next Conrad Hilton, WGU can fill your toolbox with the right tools that you'll need to build and secure your dream home or your next hotel chain.

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Speaker 1:

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