



Course material

Course:

Understanding the digital supply chain and its stakes for humanitarian actors

Video:

1.4 Hardware supply chain Conclusion

Concepts (extracted from automatically generated subtitles):

Software supply chain. Software builds of materials. Ongoing efforts. Software supply chain ecosystem. Software development. Supply chains. Phone work. Phone hardware. Supply chain of rare earth materials. Various hardware companies. Low level firmware. Deep dive. Commonalities of complexity. Security. Hardware.



[to video sequence search](#)

(within Understanding the digital supply chain and its stakes for humanitarian actors.)



[to video](#)

Center for Digital Education. More educational support material here:

<https://www.epfl.ch/education/educational-initiatives/cede/educational-technologies-gallery/boocs-en/>
page 1/12

THE HARDWARE AND SOFTWARE SUPPLY CHAINS



Conclusion

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notes

summary

0m 0s



Conclusion



Protecting the software supply chain requires us to build security into DevOps and to evolve the DevSecOps process.

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Conclusion



Instead of running security on the side, it must be deeply integrated and part of all the development steps. SBOMs or software builds of materials, help track components

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Conclusion



and allow customers and vendors to ensure integrity of their code. This needs to be complemented with thorough testing and security at every step. Security is crucial and must become a first class citizen

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0m 25s



Conclusion



in software development. That was our deep dive into the hardware and software supply chain ecosystem, threats, and mitigations.

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summary

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Conclusion



Now you might wonder beyond the commonalities of complexity and scale, how do these two supply chains interact with each other? Let's go back to our example of a smartphone. There is a supply chain of rare earth materials, elements,

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Conclusion



and all the way up to batteries and glass coverings that go into building the phone hardware. However, other parts that make a phone work is the software,

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summary

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Conclusion



including low level firmware supplied by various hardware companies to operating system code such as iOS or Android OS, libraries for touchscreens and camera sensors,

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1m 13s



Conclusion



all the way to a plethora of applications available from the App Store. What makes a smartphone noteworthy is its usability and performance. It is typical to co-develop the hardware and software

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Conclusion



to get the best possible user experience. Maybe perhaps what we need is bills of material for hardware, software, and even privacy.

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While some of the ongoing efforts for security and privacy have similar underpinnings that couple hardware and software for performance, there is definitely more work that needs to be done to raise the awareness and improve the resiliency of this ecosystem.

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summary

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