

CS636: Internetworking

**Austin Schwartz & Eric Theller
Computer Science
Purdue University**

Module I

Introduction And Course Overview

Austin Schwartz

- BS/MS student who has been here forever
- Graduating in May
- Contributions
 - Worked on initial IPv6 + NAT code
 - Debugging/Printing
 - Pointed out when things were broken
 - Made these slides
- <https://www.austinschwartz.com>



Eric Theller

- Undergrad senior
- God of VR
- Contributions
 - Made the shell look like ZSH
 - Added pretty colors
 - Made ping/echo
 - Neighbor Discovery
 - Made pseudo-forwarding table (if_of_ip)
- <https://www.etheller.com>



Topic And Scope

Internetworking: an overview of concepts, terminology, and technology underlying the TCP/IP Internet protocol suite and the architecture of an internet.

~~You Will Learn~~ What We Learned

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- Network protocols are complicated
- IPv6 is weird (but some things are really nice!)
- Debugging low level networking code is extremely frustrating.
- You have to have an output queue. You can't just write whenever you want.
- https://en.wikipedia.org/wiki/Design_by_committee

Module II

Our Project

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- Neighbor Discovery

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- Bunch of debug shell commands
- Code isn't elegant, but it works

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✓ Othernet h1/h2 -> h0

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- ✓ H0/H1/H2/NAT pinging themselves
 - and loopback address (::1)
- ✓ H1/H2 <-> NAT
- ✓ H1/H2 -> Frontend (With hacks)
- × Pinging on a bad day (IP is best effort)

Slides

- Slides available here: <https://github.com/lords-of-internetworking/slides>