



# CIS 5530: Networked Systems

Putting it all together

February 22, 2023



# Midterm 1

## Midterm 1

- Date: Wednesday, March 1 in class
- Format: 75 mins
  - Multiple choice and short answer
  - Includes everything from lecture (slides, things I said, blackboard)
  - Also includes readings and project
- You are allowed a 1 page (front/back) cheat sheet
  - Handwritten
  - OR 11-point Times New Roman, 1 in margins, single spaced, default kerning
  - Write your name on it and turn it in with your test
  - No other assistance! No tech, no wandering eyes, no talking to your friends



# Agenda

- Discovery ✓
  - ARP ✓
  - DHCP ✓
- Putting it all together ← NEXT



# DNS Resolver



Routing  
ARP  
Forwarding

# DHCP



Routing  
ARP  
Forwarding

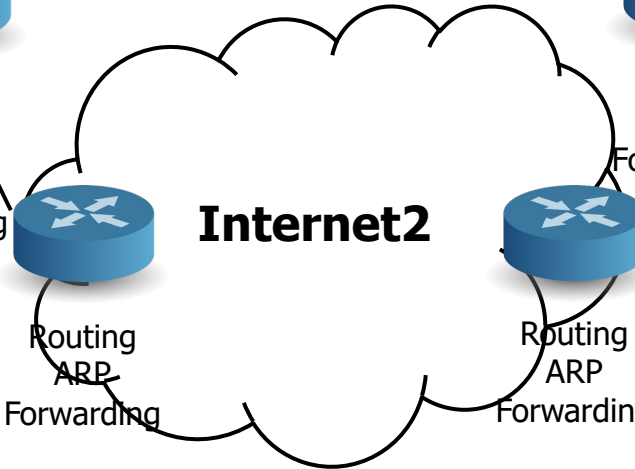
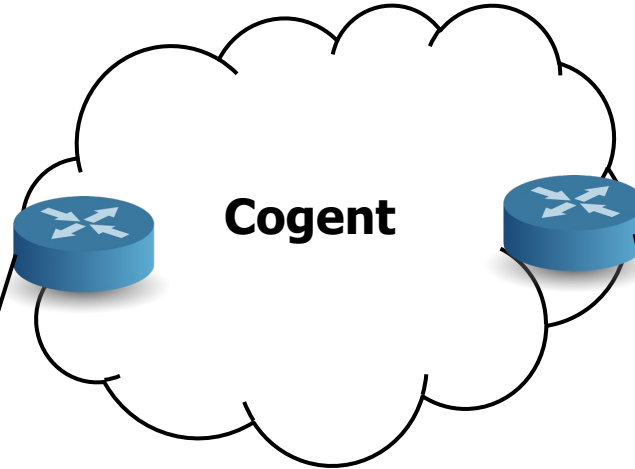


Routing  
ARP  
Forwarding

# NAT



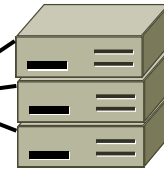
NAT  
Routing  
ARP  
Forwarding



Routing  
ARP  
Forwarding



Forwarding



Routing  
ARP  
Forwarding



# DNS Resolver



Dst IP	NH IP
10.102/16	Local
0.0.0.0/0	DHCP

10.102.188.48

# DHCP



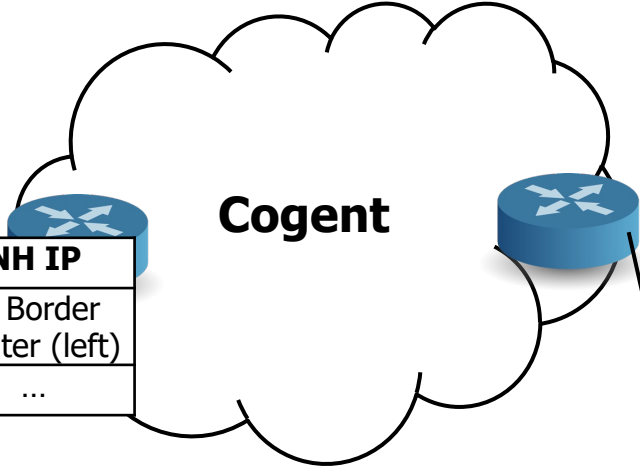
Dst IP	NH IP
142.250/15	NAT
10.102/16	Local
...	...

Dst IP	NH IP
142.250/15	I2 Border Router (left)
...	...

# NAT



# Cogent



# Internet2



Dst IP	NH IP
142.250/15	I2 Border Router (right)
...	...

Dst IP	NH IP
142.250/15	GOGL Border Router
...	...

Dst IP	NH IP
142.250/15	Local
...	...

Google: 142.250.0.0/15

142.250.80.78

