

# Communication Networks

Spring 2019 — Exercise Session 6



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April 11, 2019

# Communication Networks

## This Exercise Session



Overview of the current assignment

Tips routing project

Solve theoretical questions and/or routing project

Solutions will be published next week

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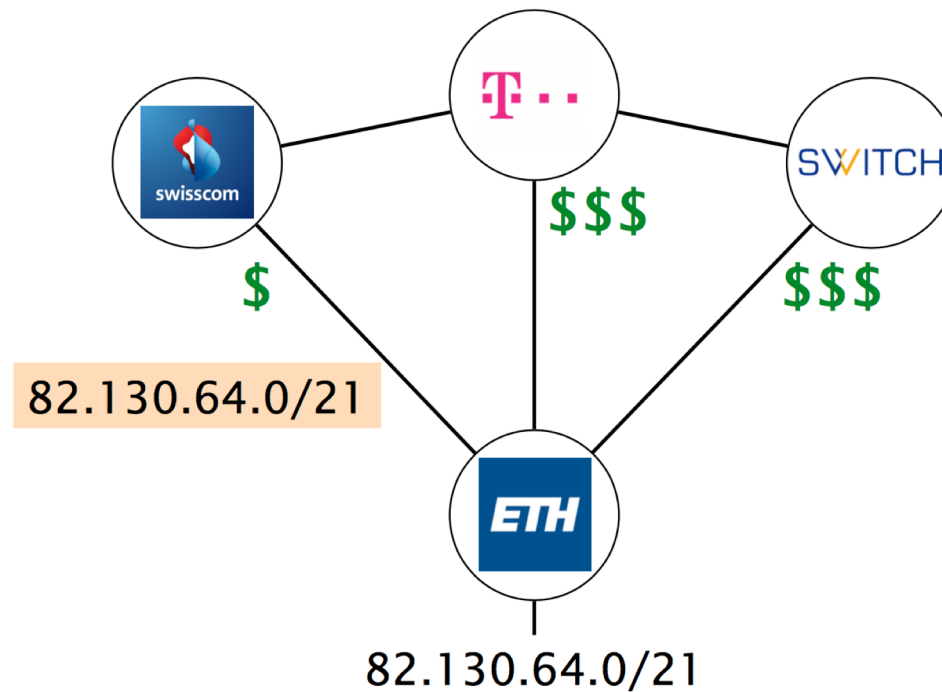
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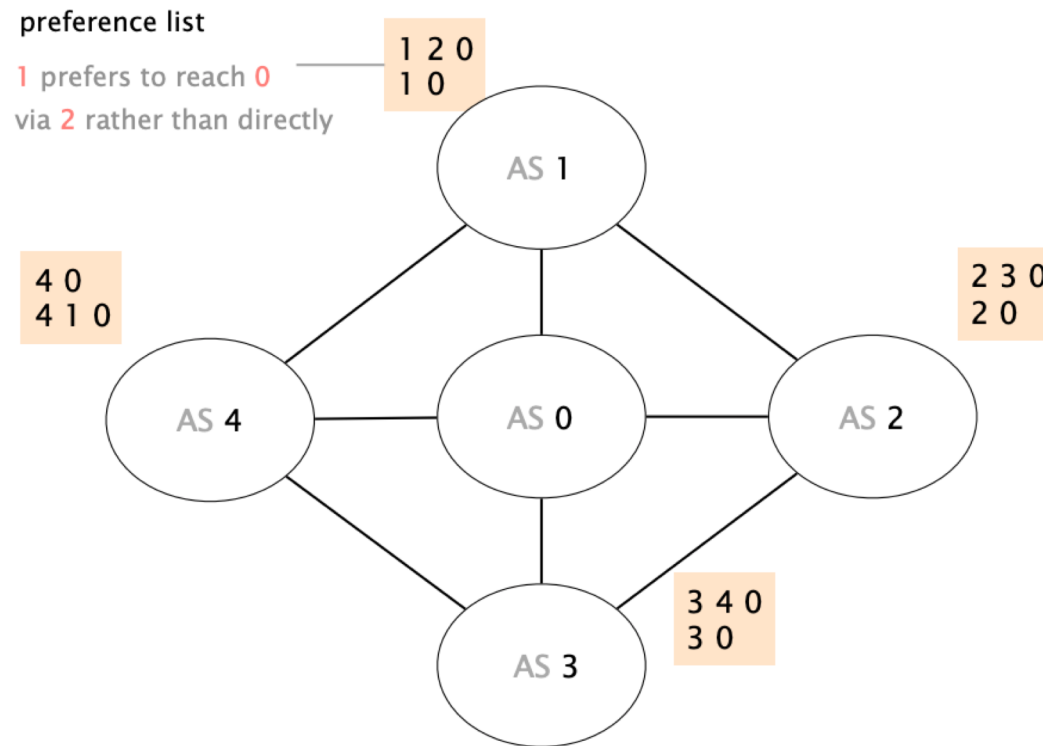
## Task 6.1: Traffic Engineering



ETH only wants to use the cheapest provider (Swisscom)

Inbound traffic engineering

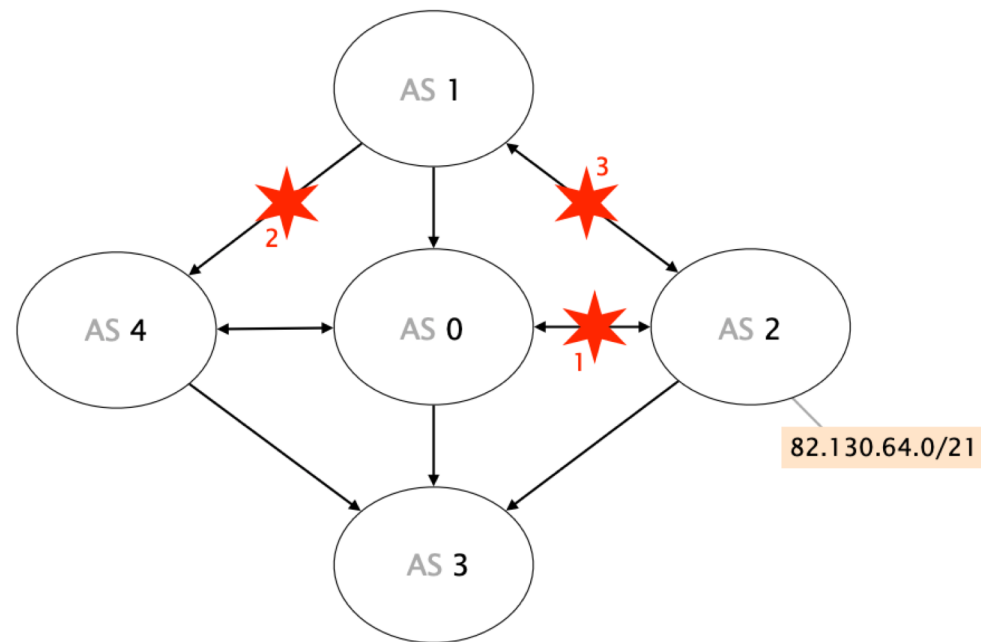
## Task 6.2: Convergence



Does this network converge?

No customer-provider or peer-to-peer policies.

## Task 6.3: Not-so-reliable Internet



Same network but with policies and link failures.

Which BGP messages are exchanged? UPDATE, WITHDRAW ...

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## Useful commands

After each route-map change: `clear ip bgp *`

List all routes matching a specific route-map:

`show ip bgp route-map <NAME>`

Routes with a specific community-value:

`show ip bgp community <A:B>`



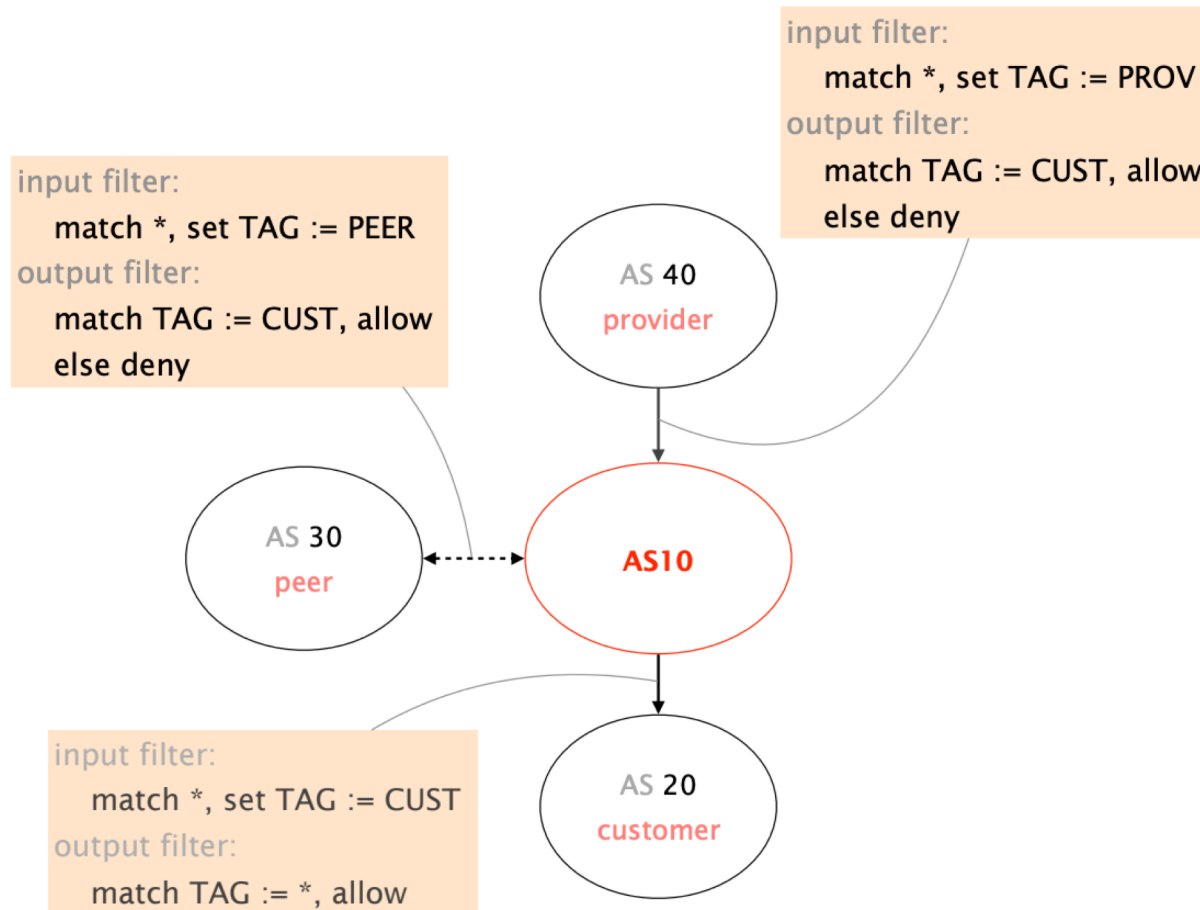
## Please note

Your own prefix should be advertised to **all** neighbors even if you implement policies.

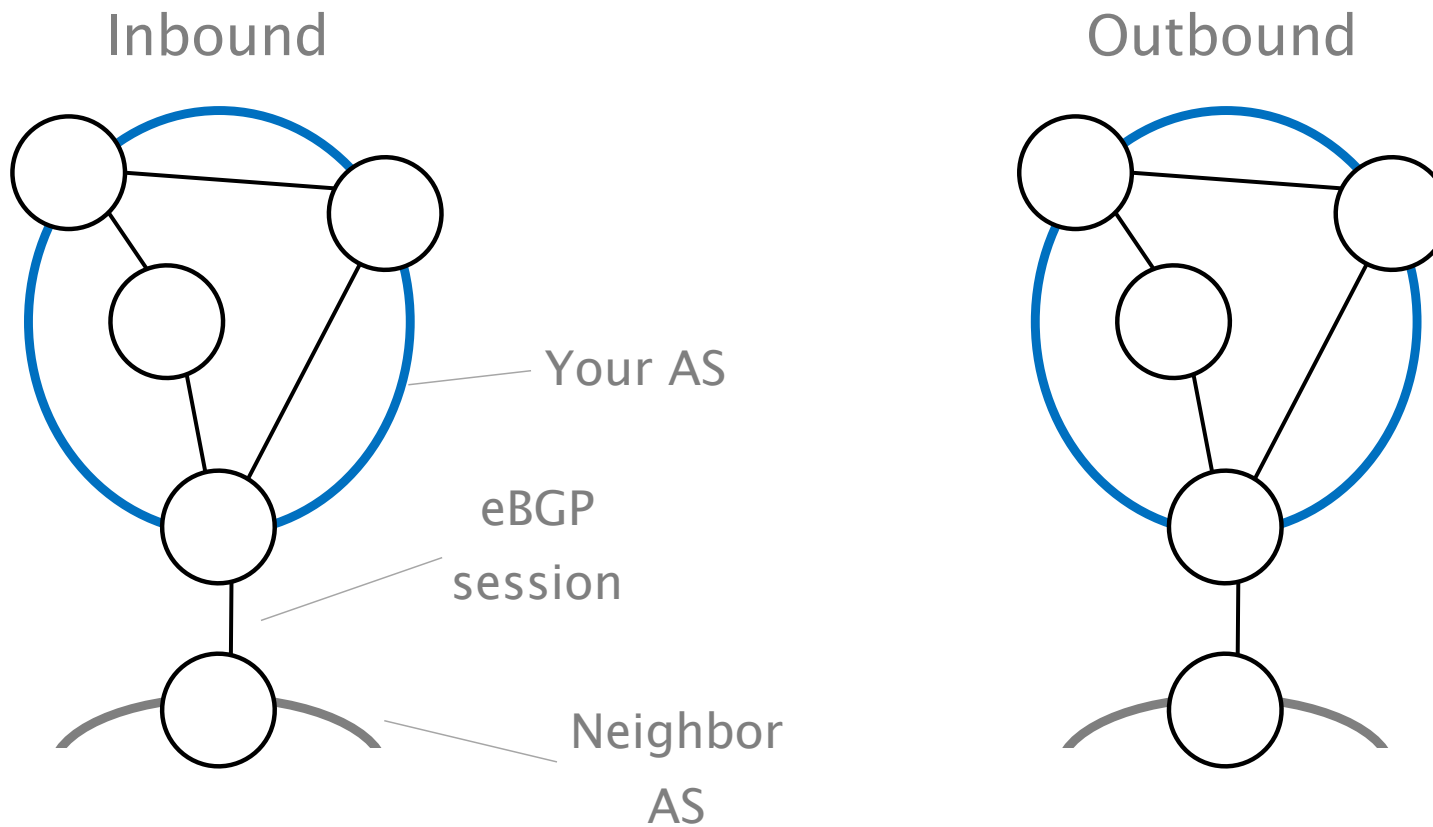
Use the advertisements of the stub ASes to test your configuration for question 3.2.

If you cannot show something due to problems of your neighbors, note it in the report (no influence on your grade).

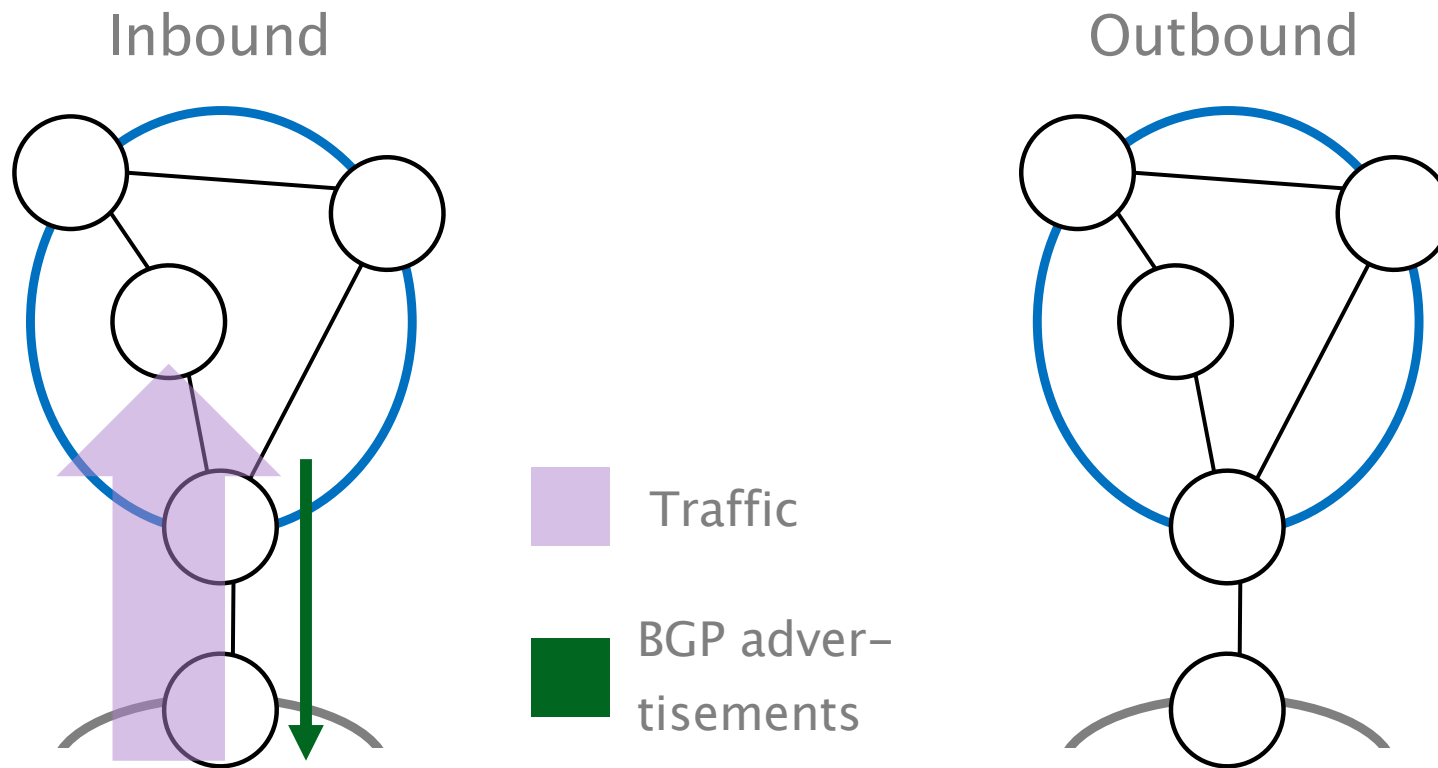
For question 3.1 have a look at the lecture slides



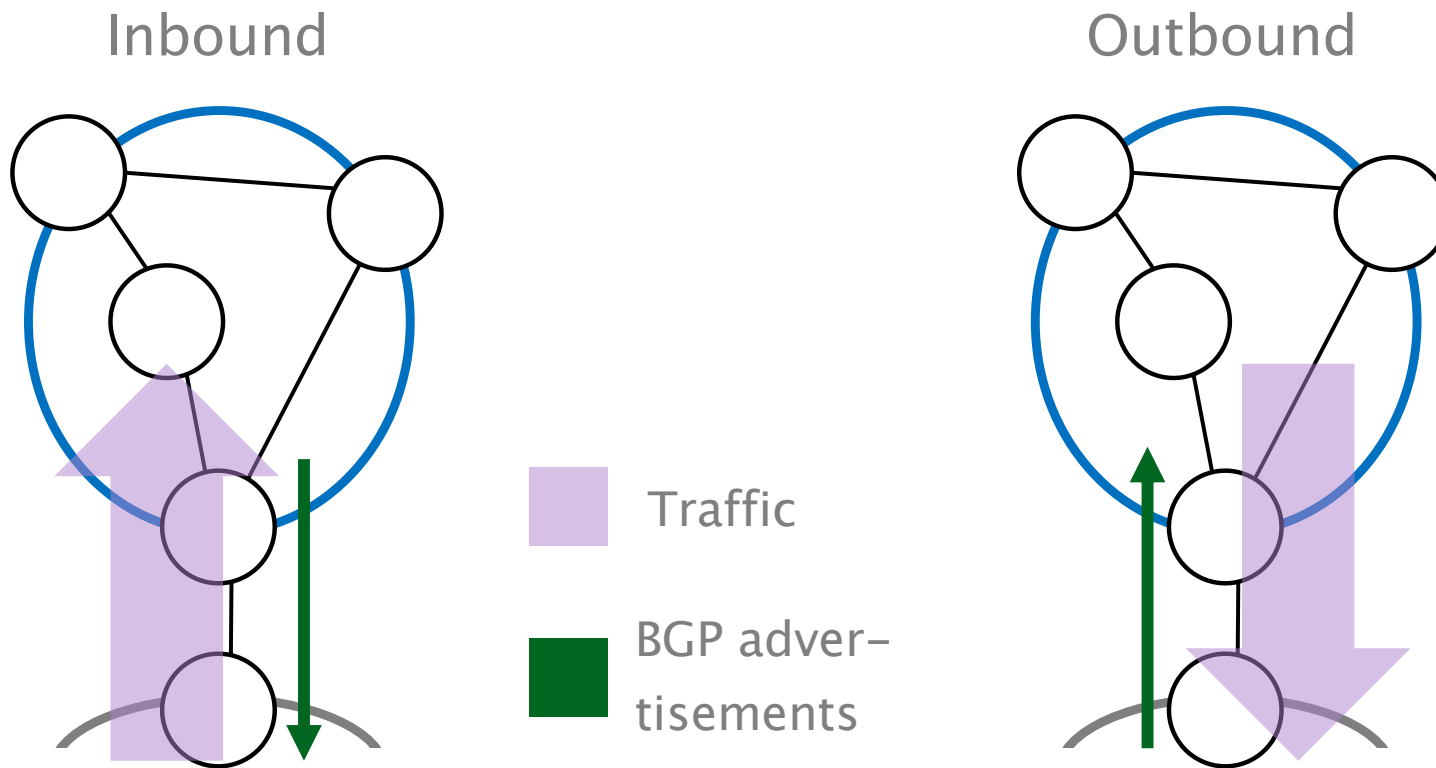
# Influence inbound and outbound traffic



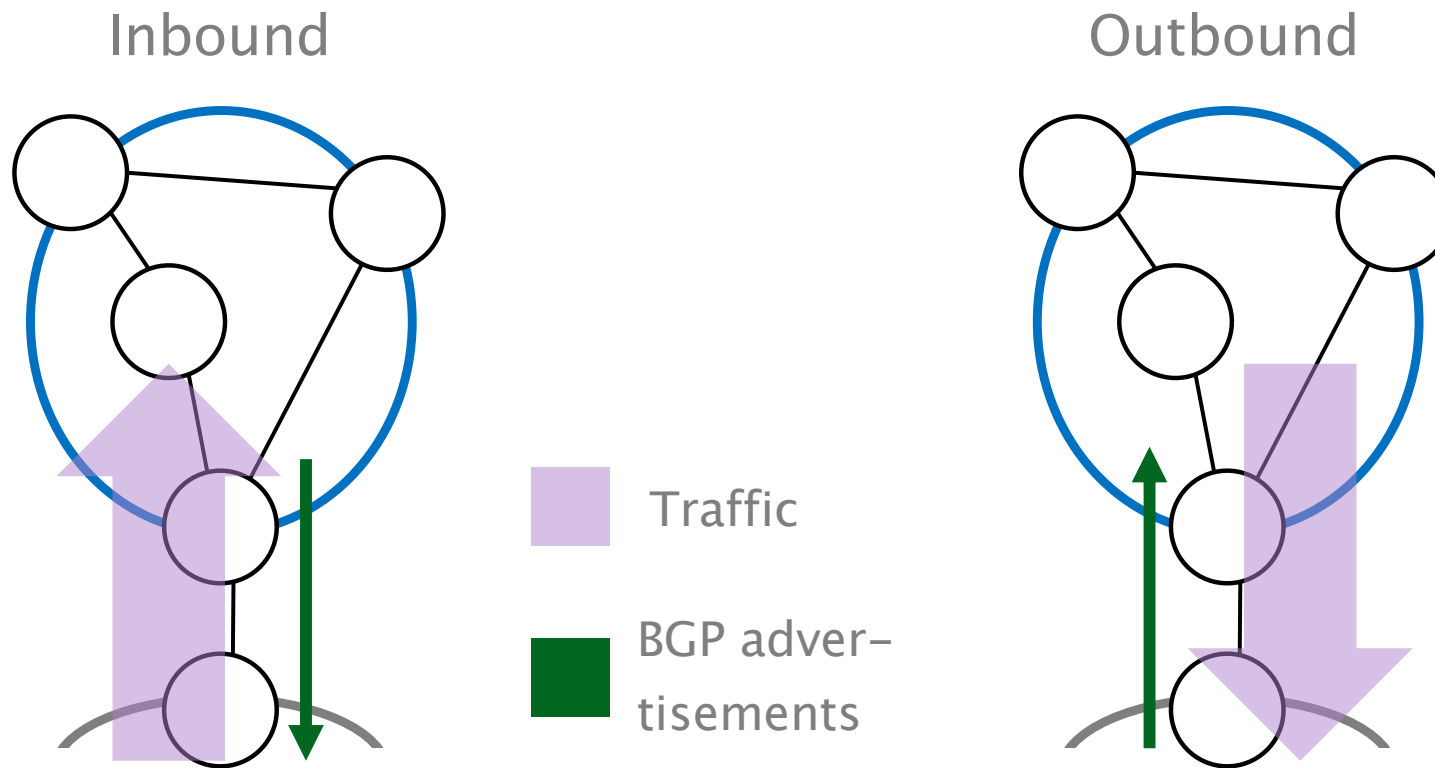
# Influence inbound and outbound traffic



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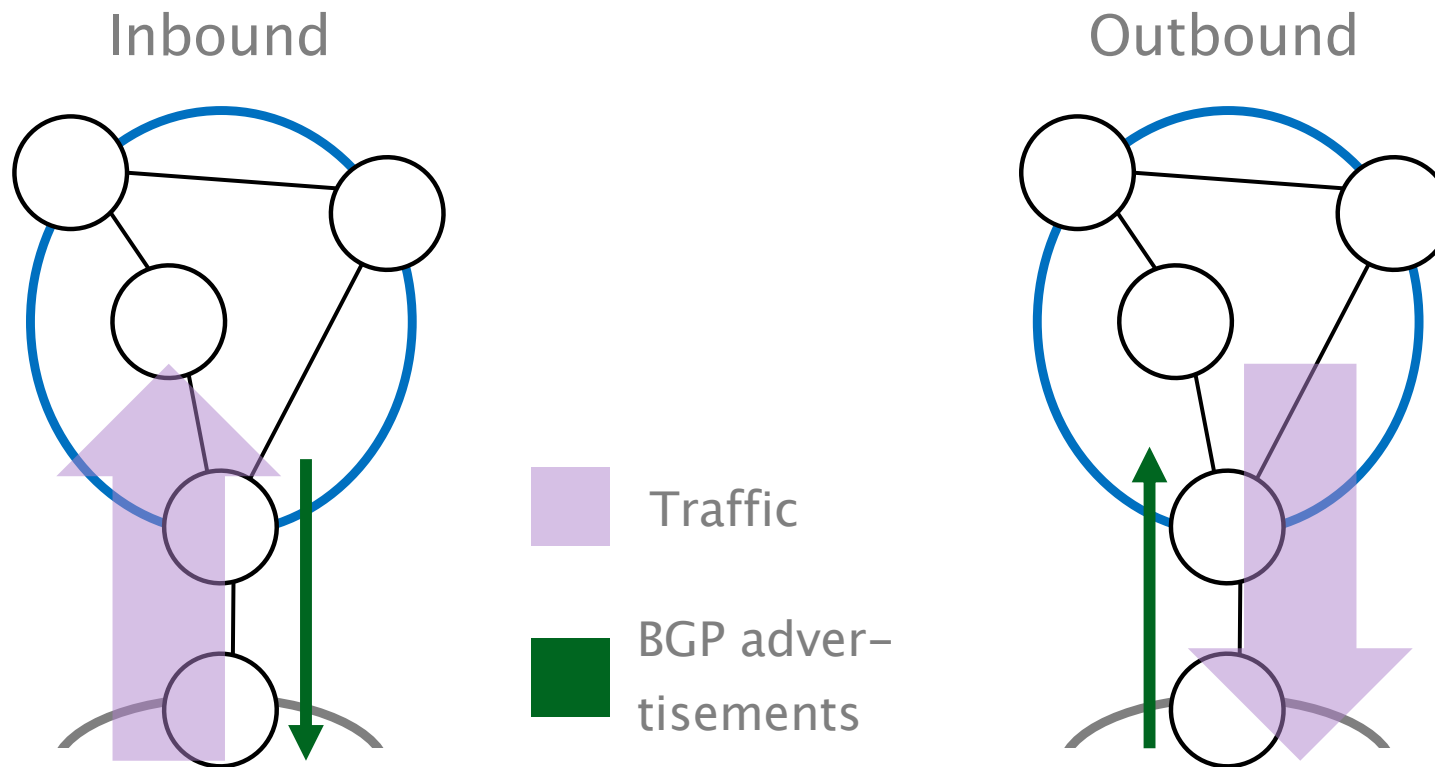


# Influence inbound and outbound traffic



Route-maps can **only** influence the advertisements!

# Influence inbound and outbound traffic



Route-maps can **only** influence the advertisements!

Full control only over **outbound** traffic!

[illegible]



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