Communication Networks

Spring 2022

Routing Project

Q/A session

April 14, 2022

Networked Systems

ETH Zürich — seit 2015

Today's short introduction is about the mini-Internet project

1. Why the matrix has many orange cells

2. How to use route-maps

3. Activation of Question 3.1

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Incorrect paths are assessed from the control plane, not the data plane

A cell is orange from AS X to AS Y if:

AS X learns an incorrect path from
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A cell is orange from AS X to AS Y if:

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This means even if the incorrect path is just a **backup path**, the cell is orange

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Route-maps can be compared to If…Else… statements

```
route-map MY_CHAIN permit 10
    match ip address prefix-list MY_PREFIX
    set community 10:30

route-map MY_CHAIN permit 20
    match rpki valid
    set local-preference 100
```

Route-maps can be compared to If…Else… statements

route-map MY_CHAIN **permit 10**

match ip address prefix-list MY_PREFIX

set community 10:30

if route is for prefix-list MY_PREFIX

permit route

set community 10:30

route-map MY_CHAIN permit 20

match rpki valid

set local-preference 100

Route-maps can be compared to If…Else… statements

route-map MY_CHAIN permit 10

    match ip address prefix-list MY_PREFIX

    set community 10:30

route-map MY_CHAIN **permit 20**

    match rpki valid

    set local-preference 100

if route is for prefix-list MY_PREFIX

    permit route

    set community 10:30

else if route has rpki valid status

    permit route

    set local-preference 100

Route-maps can be compared to If…Else… statements

route-map MY_CHAIN permit 10

match ip address prefix-list MY_PREFIX

set community 10:30

route-map MY_CHAIN permit 20

match rpki valid

set local-preference 100

implicit deny

if route is for prefix-list MY_PREFIX

permit route

set community 10:30

else if route has rpki valid status

permit route

set local-preference 100

else

deny route

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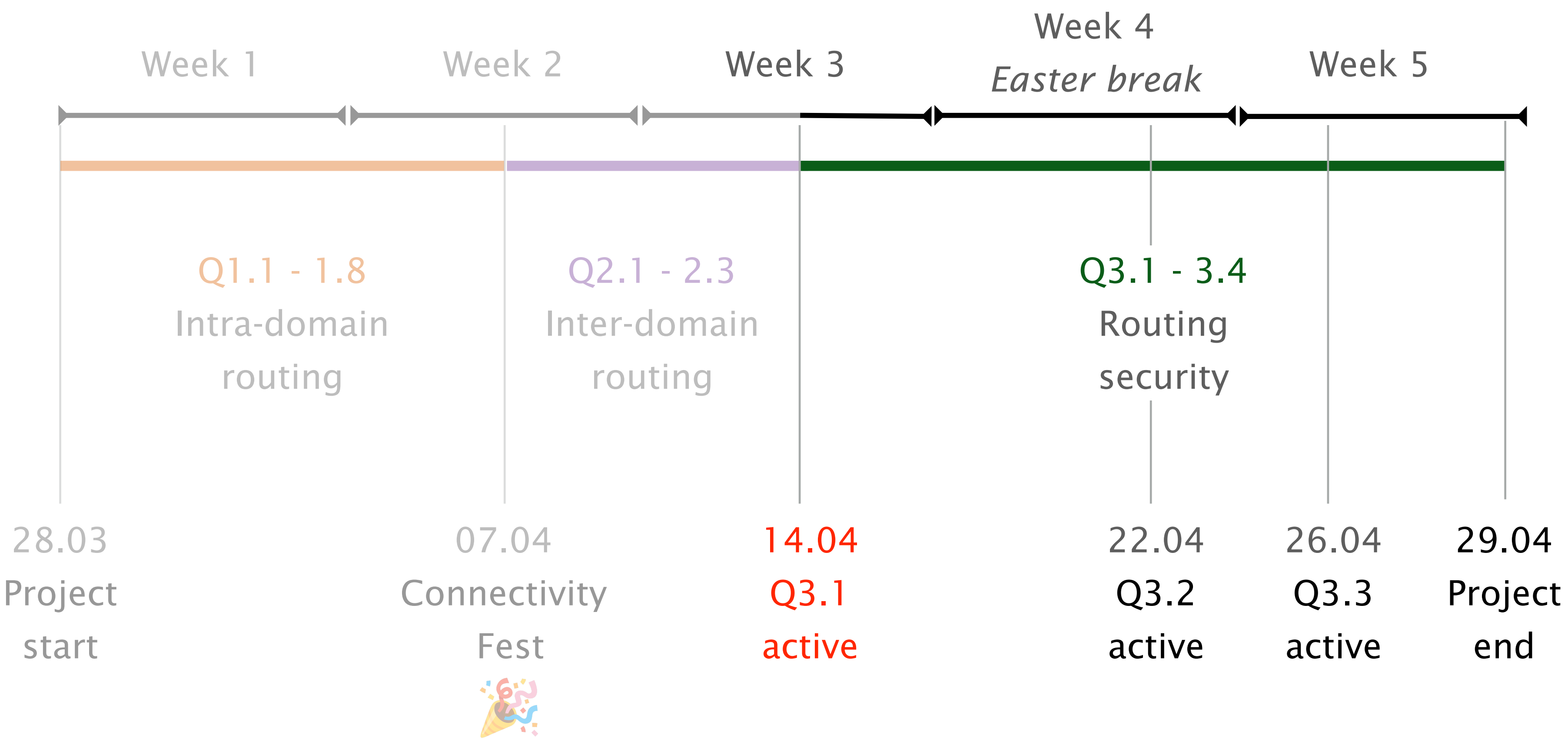
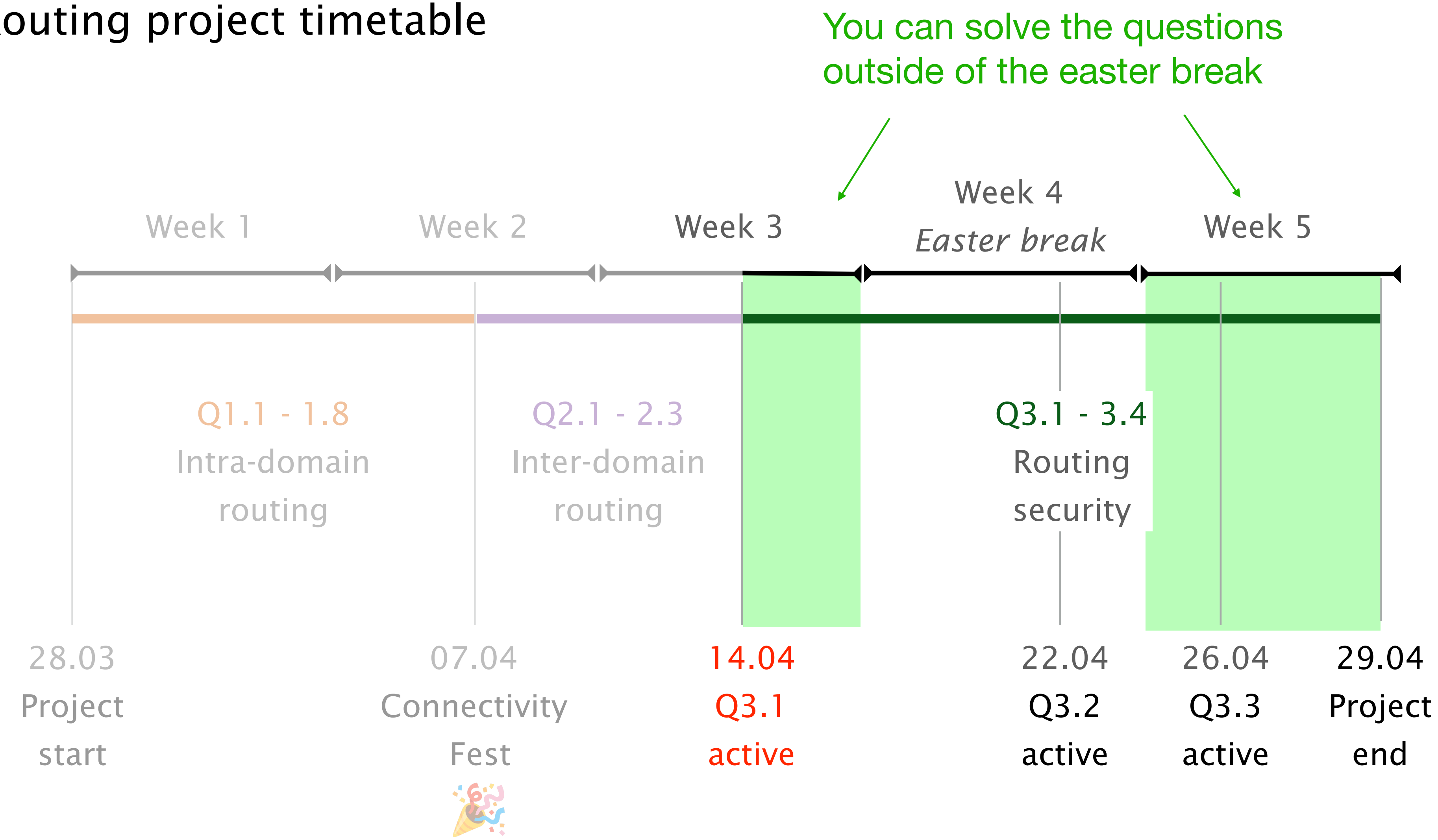
Routing project timetable



Routing project timetable



Today’s exercises are about BGP

Of course, you can also ask questions about the project