

# Covid-19 & IXPs

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# The story of covid-19 & the impact on IXPs

- It all started week 18<sup>th</sup> January 2020 when cases of the covid-19 virus appeared outside of China
- By mid February we were seeing more and more infections spread and cities & countries started to react
- We were going into a global pandemic and it was important for the community to come together early to share what was happening in other places
- Sadly the Euro-IX forum was postponed (later cancelled)
- We held our first online meeting on 13<sup>th</sup> March and since then had 7 online meeting.

# The story of covid-19 & the impact on IXPs

- Timeline – March

- We first heard from MIX, NAMEX and TOPIX who were around 3 weeks ahead in terms of lockdown
- Ireland the country and INEX the IXP took measures early and shared their planning how to safely get through the lockdown – pubs were closed for the first time on St Patrick's Day
- IXPs started working closely with their members, upgrading port capacity early, offering free ports during the crisis and offering to carry out remote hands to avoid contact
- Government relations and communication was raised as IXP staff needed to have special access to leave their houses to visit data centers for critical work

# The story of covid-19 & the impact on IXPs

- Timeline – March

- By the end of March more countries were under lockdown and working from home
- Local NOGs were coming together to support each other, ITNOG/UKNOF and others
- IXPs traffic increase approx. 30%-50% and day/evening traffic balanced out possibly due to high bandwidth usage during the day, education, gaming and video
- Concerns discussed; data center access, cable cuts, deliveries, cross connect prices
- And then there was a cable cut in South Africa and an Earthquake in Croatia!



# The story of covid-19 & the impact on IXPs

- Timeline – April
  - Telecom Italia joined the three Italian IXPs in the first week of April!
  - Majority of IXPs were now working from home and community events were being done virtually or postponed/cancelled
  - It was becoming clear the situation was not going to improve any time soon
  - We started to see strange traffic patterns - some IXPs saw a decrease.
  - By April end we started to get used to the new 'normal'.



# The story of covid-19 & the impact on IXPs

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- Timeline – May
  - While some work items, like non-essential upgrades were put on hold, it's not sustainable and IXPs are planning this work. Business as the new normal..
  - We talked about keeping connected with colleagues and teams while working from home and the impact the crisis has had on the people.

# Traffic at IXPs during covid-19



DE-CIX North A... · 11/03/2020 ✓  
We're thrilled to share that [#DECIX](#) Frankfurt has set yet another new world record! 🙌  
This week on Tuesday evening, the [#IX](#) reached more than 9.1 Terabits per second of [#data](#) traffic. [bit.ly/2IA01aN](https://bit.ly/2IA01aN) [#peering](#) [#interconnection](#) [#worldrecord](#)



MIX\_IT  
@MIX\_exchange

[#Peering](#) [#MIXpeers](#)  
[#MIXMilestones](#) [#20MIX20](#)  
[#peeringcrew](#)



11:44 · 11/03/2020 · [TweetDeck](#)

29 Likes 10 Retweets



BNIX @BNIX\_BE · 17/03/2020 ✓  
BNIX, the heart of the Belgian Internet, has passed the 390 Gbit/s mark for the very first time yesterday around 2:30pm and today again around 11:00am! It clearly shows the impact of



LINX  
@LINX\_Network

We've hit 5.00Tbps across the [#LINX](#) network - Another shout out to all the IXP [#engineering](#) and [#technology](#) teams for keeping our exchanges running and the [#datacentre](#) remote hands teams for all their hard work. [portal.linx.net](https://portal.linx.net) [#TeamWork](#) [#Kudos](#) [#Peering](#) [#Internet](#) [#IXP](#)



AMS-IX  
@AMS\_IX

[#Breakingnews](#): We reached the new traffic peak of 8

Terabits per second  
[#Amsterdam](#)  
everyone is  
possible [#ams/news](#)



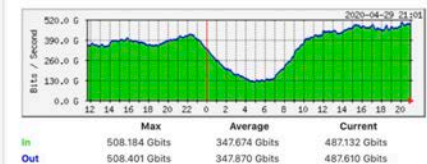
INEX  
@ComePeerWithMe

A new record at INEX this evening for traffic flowing over the exchange - 508.401Gbits [#peeringisgoodforus](#)

You Retweeted  
GRIX @GRIXsoc...  
Impressive new record  
@GRIXsocial. Today  
241Gbps of traffic  
is committed world  
future growth of [#internet](#). [#IXP](#) [#grnet\\_gr](#) @euro



Day Graph



21:15 · 29/04/2020 · [Twitter for iPhone](#)

60 Likes 10 Retweets



# Traffic and other IXPs related information



**NIX.CZ** @NIX\_CZ · 18/03/2020  
[NIX.CZ](#) offers new ports for two months free of charge. [nix.cz/en/news](#) #IXP #keeppeering



**Neil J. McRae**  
 @neilmcrae



**IXP Manager**  
 @ixpmanager



**BNIX**  
 @BNIX\_BE



**LINX**  
 @LINX\_Network



**AMS-IX**  
 @AMS\_IX



**NameX\_IXP**  
 @namex\_ixp

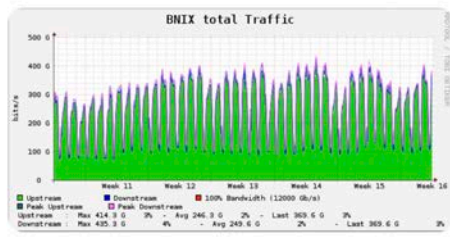
Yesterday our CEO @MaurizioGoretti @namex\_ixp expected COVID-19 in Italy from friends from Asia Exchange Association. Thank you to their NameX friend Kats Toyama. #apix #ix

After 4 weeks of [#confinement](#), we observe the same [#changes](#) in [#internet](#) [#traffic](#) as our Italian colleagues @namex\_ixp : 30-40% growth, [#peaks](#) during the afternoon instead of the evening... [#Belgium](#) [#ixp](#) [#Peering](#) [#networks](#) [#COVID19Belgium](#) [#lockdown](#) [#BeSafe](#) [#StayConnected](#)

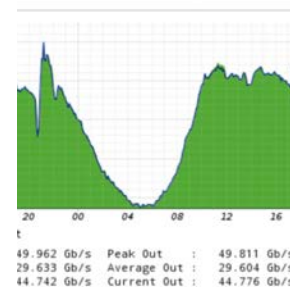
If you need your [#MondayMood](#) lifted, not long to wait until the [#LINX109](#) networking virtual social event this Wednesday, courtesy of the [#DJsInTech](#)! We hope to see you there 🎧 🍷 [#LINX](#) [#Peers](#) [#Beers](#) [#UnitingNetworks](#) [#Igniting](#) [#contact](#)

-IX India saw a 9 minute decrease when the Indian government asked for the try to unite against the virus by switching off all and lightning candles her. [ow.ly/IRec50zaLwx](#) [istogether](#) [#staysafe](#)

**INEX**  
 @ComePeerWithMe



Recordings of talks at our recent online meeting for members are now online. Nick Hilliard - INEX CTO on INEX Engineering Resiliency in a Pandemic and clinical psychologist, Dr Tim Green on Resiliency in a Pandemic - Dealing with the Stress of Covid-19



23:51 · 30/03/2020 · [Tweet](#)

22 Retweets 24 Likes

/2020 · [Hootsuite Inc.](#)





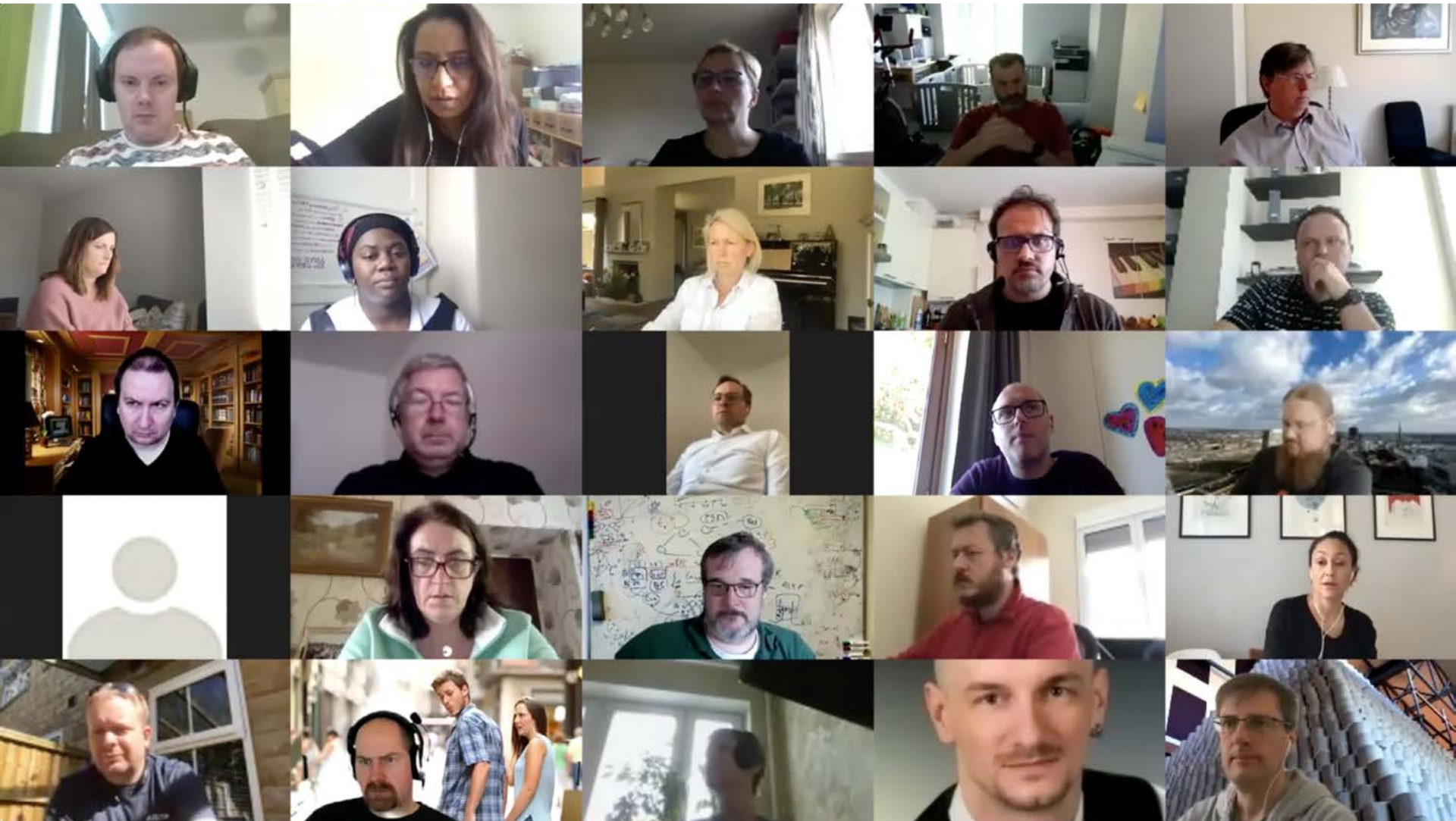
## Conclusions – IXPs and Covid-19

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- IXP are central to the interconnect solution and have the resilience and scalability to adapt quickly to the industry needs
- The openness and sharing is invaluable
- This was possible because of trust and relationships built over time and it's important we find ways to continue to build these relations
- We're all learning and adapting to this new way of life
- In the mean time, I'm thankful for this...



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Thank You!

euro-IX