

SE Extra

HD Netflix's Russian suit; UK's gaming probe; Deutsche Telekom's T-Mobile US stake

BY Naimatullah Khan

WC 891 words

PD 14 April 2022

SN SNL Financial Extra

SC SNLFE

LA English

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Note: The Daily Dose Europe will not publish Friday, April 15 and Monday, April 18. Your next issue will be Tuesday, April 19.

TOP NEWS IN TMT

TD

- * Netflix Inc. is facing a Russian lawsuit by users claiming 60 million Russian rubles in compensation for allegedly violating user rights by suspending its services in the country, Reuters reported, citing the RIA news agency.
- * The U.K. Competition and Markets Authority completed its probe into the online gaming sector and secured undertakings from Sony Group Corp. and Nintendo Co. Ltd. over auto-renewal practices related to their respective gaming services. The regulator's investigation covered online gaming service subscriptions where people are automatically charged indefinitely until they take action to end their contract.
- * Deutsche Telekom AG acquired additional shares in T-Mobile US Inc. from SoftBank Group Corp. for \$2.4 billion, Manager Magazin reported. The German telecom group purchased 21.2 million shares via a call option raising its stake in T-Mobile US to 48.4%.
- ➤ Economics of Advertising: Broadcast viewership flat YOY in February despite Olympics coverage

Viewership declines from several scripted and unscripted broadcast programming offset viewership growth from NBC (US)'s 2022 Beijing Winter Olympics coverage.

➤ Video game industry explores blockchain, metaverse opportunities – S&P podcast

The video game industry is exploring new avenues for growth in 2022, leading to record M&A activity and increased interest in metaverse and blockchain technologies.

TECHNOLOGY

- * French consumer watchdog DGCCRF fined Amazon.com Inc. €90,000 per day for failing to comply with an injunction to remedy the "out of balance" clauses in its contracts with merchants, Le Figaro reported. Amazon said it will comply but will also challenge the decision in court.
- * Sweden's Invisio AB (publ) and U.K.'s Marlborough Communications Ltd. were awarded a three-year in-service support contract to supply hearing protection and communication ancillaries to the U.K. Ministry of Defence.

INTERNET & OTT

- * French digital audio streaming service Deezer SA is reportedly in talks with special purpose acquisition company I2PO Société anonyme, backed by Paris-based luxury group Kering SA, to go public via a merger. The Wall Street Journal reported, citing sources.
- * Lithuania-based Telia Lietuva AB completed the upgrade of its €10.5 million cooper network project used for the rollout of the digital subscriber line, or DSL, internet. The Telia Co. AB (publ) unit also plans to upgrade its fiber-optic network soon.
- * Walt Disney Co.'s Disney+ will stream all seasons of "American Horror Story" on its platform in the U.K. and Ireland on April 27, according to a tweet.
- * Amazon Prime Video unveiled seven new French Amazon original productions: "Alphonse," "Medellín," "Hawa," "Classico," "Cosmic Love," "Ourika" and "Killer Coaster," Digital TV reported.

MEDIA

- * Netflix raised its ownership in Finnish gaming company Next Games Oyj to over 90%.
- * French media group Vivendi SE's takeover bid for Lagardere SA shares it does not already own at €25.50 per share will open from April 14 to May 20 inclusive. Les Échos reported.
- * British Broadcasting Corp. warned a video carrying its branding and claiming Ukraine carried out a missile attack on a railway station is fake, the BBC said in a tweet.
- * News Corp. UK & Ireland Ltd. named Simon Farnsworth chief technology officer and executive vice president. News Corp. owns News Corp. UK & Ireland Ltd.

TELECOMMUNICATIONS

- * Telecom Italia SpA said its Brazilian subsidiary TIM SA, together with Telefônica Brasil and Claro Brasil, notified Oi SA of the closing acquisition process relating to the latter's mobile assets. The notification comes after the receipt of regulatory approvals and the transaction is set to close April 20. Meanwhile, the telco appointed Roberto Mazzilli to the newly created role of chief IT corporate and market systems officer.
- * In other Telecom Italia news, France's Iliad is considering acquiring the Italian telco's domestic consumer services operations, which reportedly accounted for 73% of its €9.9 billion domestic service revenue in 2021, Reuters reported, citing sources.
- * KPN NV appointed Gerard van de Aast chairman of the supervisory board at its annual general meeting, succeeding Duco Sickinghe.
- * Sweden's Enea AB (publ) signed a new financing deal with DNB Bank ASA and AB Svensk Exportkredit (publ) comprising a €40 million term loan facility and 350 million Swedish kronor worth of revolving credit facility. The new facilities will help repay the debt to DNB Sweden AB and fund future acquisitions.

FILM & TV

* The BBC acquired the crime-drama series "Tokyo Vice" from New York-based film company Endeavor Content. The series is co-produced by Warner Bros. Discovery Inc.'s HBO Max, Endeavor Content and Japanese broadcaster Wowow Inc.

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Subscribe here to our new weekly feature, APAC TechWatch, which highlights the latest on topics such as artificial intelligence, financial technology, the internet of things, cloud computing, cybersecurity, 5G and semiconductors in the Asia-Pacific region.

Anne Freier, Sylvia Edwards Davis, Koen Pijnappels and Gerard O'Dwyer contributed to this report.

The Daily Dose has an editorial deadline of 7 a.m. London time. Some external links may require a subscription. Links are current as of publication time, and we are not responsible if those links are unavailable later.

- dbptel: Deutsche Telekom AG | nindo: Nintendo Co Ltd | offair: Competition and Markets Authority | sftbnk: SoftBank Group Corp. | snyco: Sony Group Corp. | netfli: Netflix, Inc. | televk: Telia Company AB | vcestr: T-Mobile US Inc.
- IN i3302 : Computers/Consumer Electronics | i3454 : Personal Electronics | i49411 : Video Game Consoles | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile

Telecommunications | icnp : Consumer Goods | idistr : Media Content Distribution | idurhg : Durable Household Products | ielec : Consumer Electronics | ihome : Home Electronics/Appliances | iint : Online Service Providers | ilgood : Leisure/Travel Goods | imed : Media/Entertainment | imssoft : Streaming Services | itech : Technology

- NS c181 : Acquisitions/Mergers/Shareholdings | cacqu : Acquisitions/Mergers | ccat : Corporate/Industrial News | gillgb : Illegal Gambling | c18 : Ownership Changes | cactio : Corporate Actions | gcat : Political/General News | gcrim : Crime/Legal Action | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter
- russ: Russia | uk: United Kingdom | usa: United States | asiaz: Asia | bric: BRICS Countries | devgcoz: Emerging Market Countries | dvpcoz: Developing Economies | eeurz: Central/Eastern Europe | eurz: Europe | namz: North America | ussrz: CIS Countries | weurz: Western Europe
- IPD Industry News
- PUB S&P Global Market Intelligence
- AN Document SNLFE00020220415ei4e000b6



HD Telia Lithuania invests EUR 10 mln to upgrade copper network over past 4 years

WC 266 words
PD 14 April 2022

SN Telecompaper Europe

SC TELEUR
LA English

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Telia Lithuania has completed the upgrade of its cooper network used for the provision of DSL internet. The project took four years to complete. From now on, customers who have copper access lines will be offered an internet connection at up to 250 Mbps. The total **investment** in this project amounted to EUR 10.5 million.

The operator covers 900,000 households with its **fibre**-optical network but there are still areas and settlements which pose considerable difficulties in terms of installing **fibre**-optical **cable**. For this reason, Telia Lithuania has implemented Super VDSL technology, which enables a ten-fold increase in the internet speed via copper lines.

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IN

Over the four years, Telia Lithuania network engineers updated almost 1,600 network nodes throughout the country, letting the company raise DSL broadband internet speeds more than ten-fold, from a maximum download speed of up to 20 Mbps to 250 Mbps, given specific conditions. The actual speed achieved depends on the length and quality of the copper line connecting Telia's exchange and the back-end equipment.

The network was upgraded by replacing equipment at the nodes and the back-end equipment at customer premises, while the copper lines have remained underground as before. Following the upgrade of the copper access network, the internet speed has significantly increased for 125,000 customers.

Customers of Telia Lietuva's fibre-optic internet service can currently access speeds of up to 1 Gbps. The company also plans to upgrade its fibre network in the near future.

co televk : Telia Company AB

iwrlssl: Wireless Area Network Technology | i341: Wires/Cables | i3302: Computers/Consumer Electronics | i3303: Networking | iindstrls: Industrial Goods | itech: Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications

NS ccat: Corporate/Industrial News

RE eurz : Europe | lith : Lithuania | baltst : Baltic States | eecz : European Union Countries | eeurz :

Central/Eastern Europe

PUB Telecompaper BV

AN Document TELEUR0020220414ei4e0005u



HD Telia invested more than EUR 10mn in upgrading its copper network

BY Karolis Broga

WC 350 words

PD 14 April 2022

SN Lithuanian News Agency - ELTA

SC ELTA

LA English

CY (c) 2022 Lithuanian News Agency - ELTA

LP

Vilnius, April 14 (ELTA) – Telia Lietuva has completed the upgrade of its cooper network used for the provision of DSL Internet. The project took four years to complete. From now on, individual and business customers who have copper access line will be offered Internet connection with up to 250 Mbps. The total **investment** into this project amounted to EUR 10.5 million, the company said in a statement.

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"Telia Lietuva has the broadest fibre-optic access network in Lithuania which reaches as many as 900 thousand of households in the country, however, there are still areas and settlements which pose considerable difficulties in terms of installation of fibre-optic cable – it would be too problematic or cost ineffective to do that. For this reason, to ensure the best quality to our customers, we have employed Super VDSL technology which enables a 10-fold increase in the Internet speed via copper lines while retaining such advantages of a cable-based connection as reliability and stable high-speed, regardless of weather conditions or the number of connected users," Haroldas Šulčinskas, the head of network maintenance and development, said.

Over the four years, network engineers of Telia Lietuva have updated almost 1,600 network nodes throughout Lithuania. This allowed the Company to increase the broadband DSL Internet speeds more than 10-fold: from a maximum download speed of up to 20 Mbps to 250 Mbps, given specific conditions. The real speed depends on the length and quality of the copper line connecting the Telia Lietuva exchange and the back-end equipment.

The network was upgraded by replacing the network equipment at the nodes and the back-end equipment at the customers, while the copper lines have remained underground like before. Following the upgrade of the copper access network, the Internet speed has significantly increased for 125 thousand of Telia customers.

Customers of Telia Lietuva fibre-optic Internet currently enjoy Internet speeds of up to 1 Gbps. The Company also plans to upgrade its fibre-optic network in the near future.

CO Itvcom: Telia Lietuva AB | televk: Telia Company AB

IN iwrlssl: Wireless Area Network Technology | i341: Wires/Cables | i3302: Computers/Consumer Electronics | i3303: Networking | iindstrls: Industrial Goods | itech: Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications

NS ccat : Corporate/Industrial News

RE lith: Lithuania | baltst: Baltic States | eecz: European Union Countries | eeurz: Central/Eastern Europe | eurz: Europe

PUB Lithuanian News Agency - ELTA

AN Document ELTA000020220414ei4e0002t

HD Lithuania: Telia Lietuva completes upgrade of copper network

CR M-Brain

WC 71 words

PD 13 April 2022

SN Esmerk Baltic News

SC ESMKBA

LA English

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MarketScreener, 13 Apr 2022, online:- Lithuanian telecommunications operator Telia Lietuva has completed the upgrade of its copper network used for the provision of DSL internet services. The project took four years to complete. Customers who have a copper access line will be offered internet connection with up to 250 Mbps. The total **investment** into this project amounted to EUR 10.5mn.

CO Itvcom: Telia Lietuva AB | televk: Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS nabst: Abstracts | ccat: Corporate/Industrial News | ncat: Content Types

RE lith: Lithuania | baltst: Baltic States | eecz: European Union Countries | eeurz: Central/Eastern Europe | eurz: Europe

IPD Corporate, New Capacity, Output Decisions, Plant Closures

PUB M-Brain Insight Oy

AN Document ESMKBA0020220413ei4d0000h



HD BRIEF-Telia Lietuva Has Completed 4-Year And EUR 10.5 Million Upgrade Program For DSL

Internet

WC 58 words

PD 13 April 2022

ET 07:50

SN Reuters News

SC LBA
LA English

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April 13 (Reuters) - Telia Lietuva AB:

* HAS COMPLETED 4-YEAR UPGRADE PROGRAM OF COPPER LINES FOR DSL INTERNET, WORTH OF **INVESTMENT** AMOUNTED TO EUR 10.5 MILLION Source text: Further company coverage: (Gdansk Newsroom)

RF Released: 2022-4-13T07:50:54.000Z

CO Itvcom: Telia Lietuva AB | televk: Telia Company AB

IN iwrlssl: Wireless Area Network Technology | i3302: Computers/Consumer Electronics | i3303:

Networking | itech : Technology | i7902 : Telecommunication Services | i79022 : Wireless

Telecommunications Services

NS ccat : Corporate/Industrial News

RE lith: Lithuania | baltst: Baltic States | eecz: European Union Countries | eeurz: Central/Eastern

Europe | eurz : Europe

IPD Business

IPC SERVICE:RNP

PUB Reuters News & Media Inc.

AN Document LBA0000020220413ei4d00x6h



HD Press Release: Telia Lietuva Invested More Than EUR 10 million in Upgrading its Copper Network

WC 384 words

PD 13 April 2022

ET 07:45

SN Dow Jones Institutional News

SC DJDN English

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Telia Lietuva has completed the upgrade of its cooper network used for the provision of DSL Internet. The project took four years to complete. From now on, individual and business customers who have copper access line will be offered Internet connection with up to 250 Mbps. The total **investment** into this project amounted to EUR 10.5 million.

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Over the four years, network engineers of Telia Lietuva have updated almost 1,600 network nodes throughout Lithuania. This allowed the Company to increase the broadband DSL Internet speeds more than 10-fold: from a maximum download speed of up to 20 Mbps to 250 Mbps, given specific conditions. The real speed depends on the length and quality of the copper line connecting the Telia Lietuva exchange and the back-end equipment.

The network was upgraded by replacing the network equipment at the nodes and the back-end equipment at the customers, while the copper lines have remained underground like before. Following the upgrade of the copper access network, the Internet speed has significantly increased for 125 thousand of our customers.

Customers of Telia Lietuva fibre-optic Internet currently enjoy Internet speeds of up to 1 Gbps. The Company also plans to upgrade its fibre-optic network in the near future.

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vgvqilCwl5h6xAYBW90F2DdlTo1gS8Sq0vSe7AmHjOvx 2p0RD3THP1sRgdM1rTUTY3ZA2-We8C2aUw=

darius.dziaugys@telia.lt

(END) Dow Jones Newswires

April 13, 2022 02:45 ET (06:45 GMT)

CO Itvcom : Telia Lietuva AB | televk : Telia Company AB

IN iwrlssl : Wireless Area Network Technology | i341 :

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Releases | ncat : Content Types | nfact : Factiva Filters

Dow Jones & Company, Inc.

AN Document DJDN000020220413ei4d000lh

PUB



HD Telia Lietuva Invested More Than EUR 10 million in Upgrading its Copper Network

WC 300 words

PD 13 April 2022

ET 07:45

SN Nasdaq / Globenewswire

SC HUGNEN

LA English

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"Telia Lietuva has the broadest **fibre**-optic access network in Lithuania which reaches as many as 900 thousand of households in the country, however, there are still areas and settlements which pose considerable difficulties in terms of installation of **fibre**-optic **cable** – it would be too problematic or cost ineffective to do that. For this reason, to ensure the best quality to our customers, we have employed Super VDSL technology which enables a 10-fold increase in the Internet speed via copper lines while retaining such advantages of a **cable**-based connection as reliability and stable high-speed, regardless of weather conditions or the number of connected users," Harold Šulčinskas, Head of Network Maintenance and Development, said.

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CO Itvcom: Telia Lietuva AB | televk: Telia Company AB

IN iwrlssl: Wireless Area Network Technology | i341: Wires/Cables | i3411: Fiber Optic Cable | i3302: Computers/Consumer Electronics | i3303: Networking | i34531: Semiconductors | iindele: Industrial Electronics | iindstrls: Industrial Goods | ioptoel: Optoelectronic Devices | itech: Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications

NS ccat : Corporate/Industrial News | npress : Press Releases | ncat : Content Types

RE lith: Lithuania | baltst: Baltic States | eecz: European Union Countries | eeurz: Central/Eastern Europe | eurz: Europe

IPD Telecommunications

PUB NASDAQ OMX Corporate Solutions International Limited

AN Document HUGNEN0020220413ei4d00105



SE Extra

HD Telecom Italia, CDP deal; EU on Microsoft's cloud practice

BY Naimatullah Khan

WC 1.027 words

PD 4 April 2022

SN SNL Financial Extra

SC SNLFE

LA English

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TOP NEWS IN TMT

* Telecom Italia SpA, or TIM, signed a nondisclosure agreement with Italian state lender Cassa depositi e prestiti SpA unit CDP Equity to start preliminary talks on a potential merger of TIM's network with the network of Open Fiber Spa. Separately, KKR & Co. Inc. plans to cancel its €10.8 billion offer for TIM if the latter fails to provide the due diligence it requested in November 2021, Bloomberg News reported, citing sources.

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- * EU antitrust regulators are questioning Microsoft Corp.'s competitors and customers about its cloud business and licensing deals, Reuters reported, citing a questionnaire. The move follows complaints, reportedly submitted by German software provider Nextcloud GmbH, France's OVH Groupe SA and two other companies, and could lead to a formal probe of the U.S. tech company.
- ➤ Economics of Internet: State of Austrian OTT video: Subscription

The over-the-top video market in Austria added about 400,000 new subscriptions, reaching 2.77 million at the end of 2021.

➤ Data Dispatch: Latin America's box office continues growth in February with 492.9% YOY surge

Among the monitored markets, Mexico outpaced Brazil and Argentina, with the country's cumulative gross box office revenue improving year over year by 417.4% for the month to \$26.3 million.

TECHNOLOGY

- * The U.K. government denied reports it approved Nexperia BV's acquisition of microchip factory, Newport Wafer Fab, or Nexperia Newport, BBC News reported. Politico earlier reported U.K. ministers "quietly approved" the sale to the Wingtech Technology Co. Ltd. unit.
- * QUALCOMM Inc. and SSW Partners completed their proposed acquisition of Sweden-based car-safety company Veoneer Inc. for \$37 per share in an all-cash transaction, representing a total equity value of \$4.6 billion. Qualcomm and SSW Partners expect to complete the sale of Veoneer's Arriver business on April 4.
- * China reportedly conducted a cyberattack on Ukraine's military and nuclear facilities shortly before Russia's invasion of Ukraine, The Times (London) reported, citing intelligence memos. The U.K.'s National Cyber Security Centre is investigating the allegations that over 600 websites of Ukraine's defense ministry were targeted, The Guardian (London) reported.
- * German Interior Minister Nancy Faeser is willing to amend the German constitution to give the federal government more powers in cybersecurity, RND reported, citing an interview.
- *ASML Holding NV withdrew the nomination of Deloitte Accountants BV as its new external auditor due to a conflicting advisory role involving a company in which ASML holds an equity stake.

INTERNET & OTT

- * Elena Bunina stepped down as CEO of Netherlands-registered internet company Yandex NV weeks before her tenure end date of April 15, Reuters reported, citing an email.
- * Nordic Entertainment Group AB (publ)'s Viaplay streaming service is set to debut in the U.K. by the end of 2022, The Daily Telegraph (London) reported.
- * Proximus plans to provide fiber connection to over 65,000 residences and businesses in West Flanders, Belgium, by 2024 and aims to reach 80% coverage in the region by 2028.

MEDIA

- * The U.K. secretary of state confirmed the appointment of Michael Grade as the Ofcom chair after a preappointment hearing with the Digital, Culture, Media and Sport select committee. Grade's term will run May 1 to April 30, 2026. Ofcom also named Ian Cheshire chair of Channel Four Television Corp., succeeding interim Chair Dawn Airey, effective April 11.
- * In other Ofcom news, the regulator launched Life Online, an online safety podcast that will explore the impacts of the Online Safety Bill.
- * Iliad's Polish subsidiary P4 Sp. z o.o., or Play, completed the acquisition of 100% of the shares of Polish cable operator UPC Poland from Liberty Global PLC for 7 billion Polish zlotys.
- * Russian orthodox channel Tsargrad TV said bailiffs recovered 1 billion Russian rubles from Alphabet Inc. unit Google LLC related to the tech company's failure to restore the channel's YouTube account, Reuters reported.
- * French soccer league Ligue de Football Professionnel, or LFP, signed an agreement with CVC Capital Partners Ltd. following which CVC will invest €1.5 billion for a 13% stake in LFP's new commercial subsidiary that will manage media rights, valuing the unit at €11.5 billion.
- * Russia's justice ministry declared eight media persons, including a journalist and a video blogger, to be "foreign agents," which subjects the individuals to strict financial reporting requirements, Reuters reported.
- * Belgian media minister of Flanders, Benjamin Dalle, plans to establish a game hub in northern Belgium as part of a broader initiative to boost the gaming sector, Datanews reported.

TELECOMMUNICATIONS

- * AINMT ASA, formerly known as Ice Group ASA, said CEO Eivind Helgaker, along with the rest of the management team, will join Lyse AS, as part of the latter's completed acquisition of Ice Group. Ola Beinnes Fosse was appointed acting CEO to oversee the remaining operations of AINMT ASA.
- * A Paris commercial court requested French telco Orange SA to maintain a contract with subcontractor SCOPELEC SA until the court hands down a decision on April 8, La Tribune reported. Scopelec alleged that Orange did not respect due notice time frames when terminating their business relationship.
- * Telia Finland Oy appointed Tuula Heikkinen president of its new consumer business arm, effective April 1. Telia Co. AB (publ) owns Telia Finland.

FILM & TV

* Gray Television Inc. completed its acquisition of WKTB-CD, which broadcasts Telemundo and other Spanish and Korean networks. The acquisition also includes WKTB-CD's sister company, Surge Digital Media LLC.

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Anne Freier, Sylvia Edwards Davis, Koen Pijnappels and Esben Svendsen contributed to this report.

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casdep: Cassa Depositi e Prestiti SpA | kkr: KKR & Co. Inc. | mcrost: Microsoft Corporation | ofibsp: Open Fiber S.p.A. | olivet: Telecom Italia S.p.A. | televk: Telia Company AB | enel: Enel S.p.A.

- IN i7902 : Telecommunication Services | iappsp : Cloud Computing | i8394 : Computer Services | ibcs : Business/Consumer Services | idserv : Data Services | iint : Online Service Providers | itech : Technology | i3302 : Computers/Consumer Electronics | i330202 : Software | i3302021 : Applications Software | i3303 : Networking | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | i79026 : Integrated Communications Providers | i81501 : Credit Types/Services | i81502 : Trusts/Funds/Financial Vehicles | i8150203 : Private Equity | ialtinv : Alternative Investments | ibnk : Banking/Credit | icomp : Computing | ifinal : Financial Services | iinv : Investing/Securities | iwrlssl : Wireless Area Network Technology
- NS c13 : Regulation/Government Policy | cdued : Corporate Due Diligence | ccat : Corporate/Industrial News | c181 : Acquisitions/Mergers/Shareholdings | cacqu : Acquisitions/Mergers | cinfpo : Information
 Technology Policy | cmerg : Mergers | c18 : Ownership Changes | cactio : Corporate Actions | ncat :
 Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter
- RE uk: United Kingdom | eurz: Europe | weurz: Western Europe
- IPD Industry News
- PUB S&P Global Market Intelligence
- AN Document SNLFE00020220405ei440002u



IET Open Access Research

HD Arelion; Arelion Opens Additional Norway Fiber Route to Continental Europe

WC 375 wordsPD 4 April 2022

SN Journal of Engineering

SC JOENG
PG 153
LA English

CY © Copyright 2022 Journal of Engineering via VerticalNews.com

LP

2022 APR 4 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- Arelion (previously Telia Carrier) announced the completion of its latest backbone route expansion in Norway. The additional fiber route brings a new level of resilience, capacity and diversity for connections between Norway and the rest of the world, via continental Europe.

Arelion (then Telia Carrier) was awarded the contract to build a new subterranean Internet route for Norway by the Norwegian Communications Authority in July 2020. The project goal was to provide greater resilience in the event a serious incident impacting **connectivity**, and ensuring the future **connectivity** needs of the region could be met.

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The new 750km fiber route runs from Oslo, Norway to Esbjerg, Denmark where it joins the wider Arelion pan-European network. It also includes two new PoP (points of presence) locations, in Bulk Fiber Networks' OS-IX DC in Oslo and Bulks Fiber Networks' N01 DC in Kristiansand. The new route doubles available capacity in the region, and will support new data center infrastructure, ensuring future traffic needs can be met for years to come.

Elise K. Lindeberg, Director, Security Department at the Norwegian Communications Authority, said, "This new secure route for electronic communications, which was awarded to Arelion, will help Norway address its growing and diverse traffic needs to Europe and provide increased connection security for our nation, in the event of serious incidents occurring."

Services available through Arelion on the new route include IP, Wavelength and Ethernet offerings, making sure that customers can access state-of-the-art secure connectivity to the European continent that will meet the needs of all cloud providers, data centers and enterprises. One section of the new route employs the HAVSIL subsea cable, that was built by Bulk Fiber Networks.

Staffan Gjeryd, CEO at Arelion said, "Resilient and secure connectivity across the globe has never been more important. Ensuring Norway's access to Internet through this new, diverse route to the European continent really embodies our company mission, to keep the world connected."

Keywords for this news article include: Arelion, Cybersecurity.

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IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 :

Mobile Telecommunications

NS ccat: Corporate/Industrial News

RE norw: Norway | eurz: Europe | nordz: Nordic Countries | scandz: Scandinavia

IPD Expanded Reporting

PUB NewsRX, LLC



HD Tele2 comes top of Gokind sustainability rankings

WC 175 wordsPD 4 April 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Tele2 said it has been named Sweden's most sustainable telecoms operator by Gokind, an organisation set up in 2020 to combat greenwashing. Gokind's mobile app provides automatic **sustainability** rankings for every purchase made by its users. Tele2's budget brand, Comviq, was rated second most sustainable operator by Gokind.

Telia came third on the Gokind sustainability list, with Telenor's Vimla brand in fourth place, Telenor itself fifth, Telia's Halebop brand sixth, Telia's Fello seventh, 3 Sweden's Hallon eighth, 3 Sweden ninth, and Chilimobil tenth.

TD

Gokind rates companies according to 20 criteria. Tele2 said it scored high marks for equality, with less than a 10 percent difference in the balance between the two sexes on its board; collective bargaining via trade union; emissions goals certified according to the Science Based Targets initiative (SBTi); using energy from renewable sources; emissions audited according to the GHG Protocol Corporate Standard for scopes 1 to 3; and at least a 10 percent cut in emissions year on year.

co ntcoms : Tele2 AB | televk : Telia Company AB | tvk : Telenor ASA

IN i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services

NS gsust: Sustainable Development/Sustainability | ccat : Corporate/Industrial News | ccsr : Corporate Social Responsibility | cesg : Environmental/Social/Governance | gcat : Political/General News | genv : Natural Environment | ncat : Content Types | nfact : Factiva Filters | nfcpex : C&E Executive News

RE swed : Sweden | eurz : Europe | eecz : European Union Countries | nordz : Nordic Countries | scandz : Scandinavia

PUB Telecompaper BV

AN Document TELEUR0020220404ei44000e5



HD Press Release: Daina Večkyt to take the position of Head of Finance at Telia Lietuva from July

WC 290 words **PD** 1 April 2022

ET 07:45

SN Dow Jones Institutional News

SC DJDN LA English

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The Board of Telia Lietuva has appointed Daina Večkyt as Head of Finance of the Company from 4 July 2022. The current Head of Finance, Ar nas Ling, after three years in the office, decided to leave to Company as of 29 April 2022.

"I am grateful for Ar nas' valuable contribution into transformation and modernization of finance management at Telia Lietuva and rallying team of professionals. Solid growth of the Company's market capitalization over the couple of recent years indicates that investors rely on our financial results and strategic activities. That is a huge responsibility that we entrust to Daina. I am certain, that her experience will further the success of Telia Lietuva" -- Dan Strömberg, Head of Telia Lietuva, said.

Being graduated from Vytautas Magnus University (Lithuania) as Master in Finance and Banking, Daina Večkyt currently is Head of Strat Plan Financials & Capital Investments at Sandoz International GmbH in Germany. Daina has joint Sandoz Group in 2007 in Lithuania as CFO for the Baltic Countries, later she worked as CFO for UK and Ireland. Till 2007 she occupied number of finance and sales strategy related positions in such international corporations as Mondelez and Philip Morris International in Lithuania, Austria, Germany and UK.

From 30 April till 3 July 2022, Polina Rys, Head of Business Control at Telia Lietuva, will be the Company's acting Head of Finance.

Darius D iaugys,

Head of Investor Relations,

tel. +370 5 236 7878,

e-mail:

https://www.globenewswire.com/Tracker?data=tjX45oBt uR4vX3LCVRGDxV42NqnNORk4dwygD8QZY8A66aD-O0phPG-AmwVw-

<u>GgqYsnZ9upToSEu2JwhzacHpVjtVvdoKFKsb-PDEQWMZnA</u>= darius.dziaugys@telia.lt

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(END) Dow Jones Newswires

April 01, 2022 02:45 ET (06:45 GMT)

CO Itvcom : Telia Lietuva AB | televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless

Telecommunications Services | i7902202 : Mobile

Telecommunications

NS c411 : Management Moves | cboard : Board of Directors

| negac : Equities Asset Class News | npress : Press

Releases | c41 : Management | ccat :

Corporate/Industrial News | ncat : Content Types | nfact : Factiva Filters | nfcpex : C&E Executive News Filter |

nfcpin: C&E Industry News Filter

PUB Dow Jones & Company, Inc.

AN Document DJDN000020220401ei41000p5



HD Telia Norway expands 5G network in Tromso

WC 121 words

PD 31 March 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Norway said it is expanding its **5G network** in Tromso. In June 2021, parts of Tromsoya received 5G coverage when base stations covering Nerstranda shopping centre and the area by Prestvannet were upgraded. From this week, the areas around Tromso police station, Amfi Pyramiden and Olavsvern now have 5G reception, too, and the rest of the municipality will soon follow.

The main part of Tromso city will be complete in May. Tromsdalen, Tomasjord, Kvaloysletta and Hakoya will receive 5G by the summer. In addition to 5G, the base stations in Tromso municipality will get a 4G upgrade, providing faster speeds and twice the LTE capacity, better serving people whose phones only support 4G.

co televk : Telia Company AB

idct: Digital Cellular Technology | i3302: Computers/Consumer Electronics | i3303: Networking | itech: Technology | iwrlssl: Wireless Area Network Technology | i7902: Telecommunication

Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS ccat : Corporate/Industrial News

RE eurz : Europe | norw : Norway | nordz : Nordic Countries | scandz : Scandinavia

PUB Telecompaper BV

AN Document TELEUR0020220331ei3v000b6



HD Sweden: Copper network dismantled by Telia

CR M-Brain WC 84 words

PD 30 March 2022

SN Esmerk Swedish News

sc ESMKSW

LA English

CY Copyright 2022. M-Brain

LP

Göteborgs Posten, 30 Mar 2022, online:- Swedish telecom company Telia has dismantled about 1.3 million telephone poles and 160,000 kilometres of wiring since 2014. This is a result of the old copper network being gradually replaced by mobile or **fibre**-based networks. A total of 220,000 posts were dismantled in 2021. There were a total of about 2.4 million posts present in 2014, which means that more than half have been commissioned.

co televk : Telia Company AB

IN i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202:

Mobile Telecommunications

NS nabst: Abstracts | ncat: Content Types

RE swed: Sweden | eecz: European Union Countries | eurz: Europe | nordz: Nordic Countries | scandz:

Scandinavia

IPD Forecast, Review

PUB M-Brain Insight Oy

AN Document ESMKSW0020220401ei410000r



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Scandinavia

IPD Forecast, Review

PUB M-Brain Insight Oy

AN Document ESMKSW0020220331ei3v0000r

HD Weekly internet health check, US and worldwide

BY Tim Greene

WC 28,271 words

PD 29 March 2022

SN Network World

SC NWW

LA English

CY Copyright 2022 IDG Communications Inc.

LP

The reliability of services delivered by ISPs, cloud providers and conferencing services (a.k.a. unified communications-as-a-service (UCaaS)) is an indication of how well served businesses are via the internet.

ThousandEyes is monitoring how these providers are handling the performance challenges they face. It will provide Network World a roundup of interesting events of the week in the delivery of these services, and Network World will provide a summary here. Stop back next week for another update, and see more details here.

TD

Get regularly scheduled insights by signing up for Network World newsletters

Update March 28

Global outages across all three categories last week increased from 216 to 234, up 8%, while in the US they increased from 82 to 99, up 21%.

Global ISP outages increased from 153 to 169, up 10%, and in the US they increased from 61 to 74, up 21%.

Global cloud-provider network outages increased from nine to 15, while in the US they increased from six to nine.

Global collaboration-app network outages increased from nine to 10 outages and in the US they remained at six.

There were two notable outages during the week.

On March 21, Hurricane Electric experienced an outage that impacted customers and downstream partners across multiple regions including the US, Canada, Nigeria, Australia, Malaysia, Germany, China, Denmark, Egypt, Norway, Japan, and Belgium. The outage was observed around 7:10 p.m. EDT, and lasted 37 minutes in two occurrences over an hour and 20-minute period. The first occurrence centered on nodes in Dallas, Texas and appeared to mainly impact the US and Canada. Forty minutes after this first outage cleared, the second outage was observed centered on nodes in London, England. Five minutes into the second occurrence, the London nodes recovered and nodes in San Jose, California, exhibited outage conditions for the next 10 minutes. Twenty minutes into the second occurrence, the San Jose nodes appeared to clear and nodes in New York, New York, exhibited outage conditions. The outage was cleared at around 8:20 p.m. EDT. Click here for an interactive view.

On March 22 Rackspace Technology experienced a series of outages over a period of an hour and 34 minutes that impacted downstream providers and customers in the US. The 51-minute outage was first observed around 2:40 p.m. EDT centered on Rackspace nodes in Chicago, Illinois. Thirty-four minutes later, the Chicago nodes appeared to recover. Forty minutes after first being observed, Chicago nodes once again exhibited outage conditions over a series of five short-duration outages before clearing around 4:25 p.m.EDT. Click here for an interactive view.

Update March 21

Global outages across all three categories last week increased from 210 to 216, a 3% increase compared to the week prior. In the U.S., outages increased from 66 to 82, a 24% increase.

Globally, ISP outages decreased from 159 to 153, down 4%, while in the US they increased from 49 to 61, up 24%.

Globally, cloud-provider network outages increased from seven to nine and doubled in the US from three to six

Globally, collaboration-app network outages increased from five to nine, and from three to six in the US.

There were two notable outages during the week.

On March 16, Arelion experienced an outage that impacted customers and downstream partners across multiple including, the US, Brazil, Australia, Canada, India, and Germany. The disruption lasted a total of 28 minutes, divided into two occurrences over a 35-minute period. First observed around 3:30 a.m. EDT, the first occurrence lasted 24 minutes and appeared to center on nodes in Dallas, Texas. Five minutes later some of the nodes appeared to recover, reducing the number of downstream partners and customers impacted. Around 3:55 a.m. EDT, the remaining nodes appeared to recover. Five minutes later the Dallas nodes exhibited outage conditions. The outage was cleared around 4:05 a.m. EDT. Click here for an interactive view.

On March 17, Cogent Communications experienced an outage that impacted multiple downstream providers as well as Cogent customers in countries including the US, Argentina, Brazil, Australia, Spain, and Canada. The 14-minute outage was observed around 5:00 a.m. EDT centered on Cogent nodes in San Francisco, California. Five minutes later, nodes in Los Angeles and Rancho Cucamonga, California, also exhibited outage conditions. As the nodes impacted increased, so did the number of customer networks and providers impacted. After 10 minutes into the outage the Rancho Cucamonga nodes appeared to recover and nodes in San Jose, California, exhibited outage conditions. The outage was cleared around 5:15 a.m. EDT. Click here for an interactive view.

Update March 14

Globally, the number of ISP outages decreased from 191 to 159, down17%,] and in the US were down from 80 to 49, a 39% decrease.

Globally, cloud-provider network outages remained at seven for the third week in a row but dropped from six to three in the US.

Collaboration-app network outages remained at five worldwide and at three in the US.

There were two notable outages during the week.

On March 8, Google experienced a disruption that affected Google Traffic Director customers. Observed around 1:07 p.m. EST, multiple applications, such as Spotify and Wikipedia, returned HTTP 500 server errors for some users, indicating the presence of a backend issue, and appearing to affect Google customers who used shared Virtual Private Cloud (VPC). Network connectivity to affected applications was clear during the incident, further confirming that the issue was application related. Google later confirmed that they had mitigated the issue by rolling back a recent configuration change and forcing a reprogramming of configurations. The disruption lasted 2 hours and 35 minutes and was cleared around 3:42 p.m. EST. Click here for an interactive view.

On March 9, Microsoft experienced an outage on its network that affected some downstream partners and access to services running in Microsoft environments. The outage, which lasted 19 minutes, was observed around 5:35 p.m. EST and appeared centered on Microsoft nodes in Des Moines, Iowa. Ten minutes later the number of affected Des Moines nodes appeared to rise, temporarily increasing the number of affected partners. The outage was cleared around 5:55 p.m. EST. Click here for an interactive view.

Update March 7

Global outages across all three categories last week dropped from 273 to 256, a 6% decrease compared to the week prior. In the US, outages decreased from 116 to 109, also a 6% decrease.

ISP outages globally decreased from 197 to 191, down 3%, and in the US, decreased from 95 to 80, down 16%.

Cloud-provider network outages remained at seven globally but increased in the US from two to six.

Globally, collaboration-app network outages decreased from 14 to 5, down 64%, but in the US they increased from two to three.

There were two notable outages during the week.

On March 3, Oracle experienced an outage that affected Oracle Cloud customers and downstream partners in countries including the US, Malaysia, India, Japan, and Hong Kong. The outage was observed around 6:15 p.m. EST and appeared to center on Oracle nodes in Phoenix, Arizona, and Sweden. Five minutes later, the Sweden nodes appeared to recover, limiting the impact to the US and Hong Kong. The outage lasted 10 minutes in total and was cleared at around 6:30 p.m. EST. Click here for an interactive view

On March 2, Google experienced an outage affecting its customers and downstream partners in the US and Brazil. The outage was divided into two occurrences over 39 minutes, starting at 6:25 a.m. EST and centered on Google nodes in Omaha, Nebraska. Five minutes later, nodes in Des Moines, Iowa, also exhibited outage conditions, which coincided with an increase in the number of affected customers and partners. Around 6:35 a.m. EST, the Des Moines nodes appeared to recover. About 6:40 a.m. EST, nodes in Des Moines and Sao Paulo, Brazil exhibited outage conditions. The first occurrence, lasting 28 minutes, cleared around 6:55 a.m. EST. Five minutes after appearing to clear, the Des Moines and Omaha began exhibiting outage conditions again. The outage lasted 32 minutes in total and was cleared at around 7:05 a.m. EST. Click here for an interactive view.

Updated Feb. 28

Global outages across all three categories increased from 205 to 273, up 33%, while in the US they increased from 87 to 116, also up 33%, compared to the week prior.

Globally, ISP outages increased from 156 to 197, up 26%, and in the US they increased from 70 to 95, up 36%.

Global cloud-provider outages dropped from eight to seven, and from four to two in the US.

Collaboration-app network outages increased from 10 to 14 worldwide, but they droppped from five to two in the US.

There were two notable outages during the week.

Around 9 a.m. EST on Feb. 22, Slack experienced disruption to its business-communication platform that lasted around 3 hours and 14 minutes and impacted users accessing its messaging services. During the interruption, a number of application-based errors were observed, indicating that network connectivity to Slack was intact, and the problem resided within the back-end architecture. This was later confirmed by Slack, which identified the cause as a configuration change that inadvertently led to a sudden increase in activity on the Slack database infrastructure. That left some databases unable to serve incoming requests. Slack applied a combination of rate limits and a temporary redirection of requests to replica databases, allowing the system to recover. The outage was cleared around 12:14 p.m. EST.

Around 10:06 p.m. EST on Feb. 24, PCCW experienced an outage impacting some of its ISP customers and networks in countries including, the US and China. It appeared to center on PCCW nodes located in Ashburn, Virginia, and was cleared around 10:20 p.m. EST. <u>Click here</u> for an interactive view.

Updated Feb. 21

Global outages across all three categories decreased from 271 to 205, down 24% from the week before, while US outages decreased from 119 to 87, down 27%.

Globally, ISP outages decreased from 191 to 156, an 18% decrease, and the US outages dropped from 96 to 70, a 27% decrease.

Cloud provider outages worldwide dropped from 10 to eight, and in the US from six to four.

Globally, collaboration-app network outages decreased from 13 to 10, while in the US they increased from two to five.

There were two notable outages during the week.

On Feb. 17, Level 3 Communications experienced an outage that impacted multiple downstream partners and customers across the US for a total of 28 minutes, divided into two occurrences distributed over an hour and 35 minutes. The first occurrence was observed around 2:40 p.m. EST centered on Level 3 nodes in Salt Lake City, Utah. An hour and five minutes after appearing to clear, the Salt Lake nodes began exhibiting outage conditions again that lasted nine minutes. The outage was cleared around 4:15 p.m. EST. Click here for an interactive view.

On Feb.17, Oracle experienced an outage on its network that affected customers and downstream partners interacting with Oracle Cloud services in countries including the US, Hong Kong, Australia, and Brazil. The Page 24 of 209 © 2022 Factiva, Inc. All rights reserved.

outage was observed around 3:05 p.m. EST centered on Oracle nodes in Phoenix, Arizona, and Sao Paulo, Brazil. Five minutes later, the Sao Paulo nodes appeared to recover, reducing the number of affected countries to the US, Hong Kong, and Australia. The outage lasted 18 minutes and was cleared around 3:25 p.m. EST. Click here for an interactive view.

Updated Jan. 17

Global outages all three categories last week increased from 225 to 271, up 20% while in the US they rose from 104 to 119, a 14% increase.

The number of ISP outages globally increased from 151 to 191, up 26%, and in the US they were up from 79 to 96, a 22% increase.

Cloud-provider network outages decreased from 11 to 10. In the US they decreased from seven to six.

Globally, collaboration-app network outages decreased from 14 to 13 while in the US they dropped from three to two.

On Feb. 9, Oracle experienced an outage affecting Oracle Cloud customers and partners interacting with those services in countries including the US, Japan, Germany, Ireland, India, Canada, Brazil, Belgium, the Netherlands, Malaysia, Finland, the UK, Sweden, Poland, Spain, Australia, New Zealand, South Africa, Hong Kong, Austria, Russia, Turkey, Hungary, Taiwan, Greece, Portugal, Ukraine, and China. The outage came in three waves over a space of 3 hours and 15 minutes. The first occurrence lasting about 14 minutes started around 8:20 p.m. EST and centered on Oracle nodes in San Jose, California; Phoenix, Arizona; Jerusalem, Israel; Hyderabad, India; and Tokyo, Japan. An hour and 14 minutes after that, nodes in San Jose; Hyderabad; Amsterdam, the Netherlands; and Sao Paulo, Brazil, exhibited outage conditions. After 15 minutes nodes in Sydney and Melbourne, Australia; Singapore; Ashburn, Virginia; Washington, DC; Frankfurt, Germany; San Francisco, California; Toronto, Canada; and Phoenix, Arizona; exhibited error conditions as well. That second occurrence, lasted an hour and 4 minutes, appearing to clear around 11:20 p.m. EST. After 10 minutes, nodes in San Jose and Hyderabad once again exhibited outage conditions for 4 minutes, affecting customers in the US, Poland, and the UK. That phase of the outage cleared at 11:35 p.m. EST, making the total time of the outages an hour and 22 minutes. Click here for an interactive view.

On Feb. 8, Time Warner Cable experienced a disruption that affected customers and partners in countries including the US, Canada, France, Hong Kong, the UK, India, Singapore, Australia, Germany, Ireland, Malaysia, Brazil, the Netherlands, Italy, Indonesia, Japan, Mexico, and Republic of Korea. Outages occurred in five periods over the course of an hour and 15 minutes. The first period started at 1:30 p.m. EST and lasted four minutes and appeared to center on nodes in Denver, Colorado. About 20 minutes after that a second, 24-minute occurrence was observed on nodes in Los Angeles, California, and 10 minutes into that second period, nodes in Las Vegas, Nevada, and Denver Colorado, also began exhibiting outage conditions. Around 2:15 p.m. EST, the Los Angeles, Las Vegas, and Denver nodes appeared to clear. Five minutes later, at around 2:20 p.m EST, the Los Angeles and Denver nodes exhibited outage conditions again in three, 4-minute bursts over a 40-minute period. It was cleared around 2:45 p.m. EST. Click here for an interactive view.

Updated Jan. 31

Global outages across all three categories last week decreased from 243 to 198, down 19% compared to the week prior. In the US, outages increased from 81 to 86, up 6%.

Globally, the number of ISP outages dropped from 188 to 144, down 23% while in the US they decreased from 68 to 66, down 3%.

Cloud provider network outages globally to increased from six to seven and from four to five in the US.

Globally, collaboration-app network outages dropped from 11 to three and from three to one in the US.

On Jan. 27, Hurricane Electric experienced an outage that impacted customers and downstream partners across countries including the US, the UK, France, Hong Kong, India, Japan, Germany, Singapore, China, Malaysia, and Canada. The outage was divided into three occurrences over a five-minute period. The first period, lasting around 9 minutes, was observed around 12:25 a.m. EST, centering on Hurricane Electric nodes in New York, New York, and Chicago, Illinois. Around 15 minutes after the first occurrence appeared to clear, the second was observed on nodes in Chicago. Around 1 a.m. EST, the Chicago nodes appeared to recover, but 10 minutes later, they and nodes in New York began exhibiting outage conditions again. This occurrence lasted around a minute before appearing to clear. The total outage lasted around 26 minutes and was cleared around 1:25 a.m. EST.

Updated Jan. 24

Global outages across all three categories increased from 236 to 243 last week, a 3% increase compared to the week prior. In the US, outages decreased from 86 to 81, down 6%.

Globally, the number of ISP outages increased from 173 to 188, up 9%, and in the US they increased from 66 to 68, up 3%.

Global cloud-provider outages decreased from 10 to six, and in the US they dropped from five to four.

Collaboration app network outages worldwide increased from six to 11, while in the US they remained at three for the third week in a row.

There were two notable outages last week.

On Jan. 20, Cogent Communications, experienced a series of outages over a period of an hour and 28 minutes that impacted customers globally and multiple downstream providers. The 40-minute outage was first observed around 10:08 p.m. EST and initially centered on Cogent nodes in Denver, Colorado, and Salt Lake City, Utah. This initial outage lasted around a minute and the Cogent environment remained stable for 15 minutes before experiencing a 9-minute outage observed on Cogent nodes in Dallas, Texas, and Phoenix, Arizona. An hour and a half after the initial outage, a 4-minute outage was observed on Denver nodes. Five minutes after that outage appeared to clear nodes in Denver began exhibiting outage conditions again. Fifty-two minutes after first being observed, the outage reappeared, affecting nodes in Sacramento and Oakland, California, Salt Lake City, and Denver, affecting more and more customers and providers. This occurrence lasted 17 minutes before appearing to clear around 11:20 p.m. EST. Five minutes later, Salt Lake City nodes exhibited outage conditions before clearing and being replaced by nodes located in Sacramento. The outage was cleared around 11:35 p.m. EST. Click here for an interactive view of the outage.

On Jan. 17, PCCW, a Hong Kong-based Tier 1 ISP, experienced an outage impacting some of its customers and networks in countries including the US, Singapore, Thailand, and China. The outage was first observed around 9:15 p.m. EST and appeared to center on PCCW nodes in Singapore. It lasted 34 minutes and was cleared around 9:50 p.m. EST. <u>Click here</u> for an interactive view of the outage.

Updated Jan. 17

Global outages across all three categories increased from 206 to 236 last week, up 5% compared to the week before. In the US they increased from 78 to 86, up 10%

Globally, ISP outages increased for the second consecutive week, rising from 150 to 173, up 15%, while in the US they increased from 57 to 66, up 16%.

Cloud-provider network outages worldwide jumped from two to 10, and from two to five in the US.

Globally, collaboration-app network outages doubled from three to six, and remained the same at three in the US.

Notable outages

On Jan. 10, Cogent Communications experienced an outage that affected some of its downstream providers and customers in countries including the US and Mexico. The outage was first observed around 10:20 p.m. EST and appeared to center on nodes in Phoenix, Arizona. The outage lasted 14 minutes and was cleared around 10:35 p.m. EST. Click here for an interactive view of the outage.

On Jan.12, Hurricane Electric, experienced an outage affecting customers and downstream partners across regions including the US, Hong Kong, Japan, Canada, Australia, the Philippines, and Thailand. The 14-minute outage was first observed around 1 p.m. EST and appeared to center on Hurricane Electric nodes in Minneapolis, Minnesota, and Seattle, Washington. Five minutes later, the Minneapolis nodes appeared to recover and those in Tokyo, Japan, exhibited outage conditions. This coincided with an increase in the number of downstream partners and countries impacted. Around 1:10 p.m. EST, the Tokyo nodes appeared to clear. The outage was cleared around 1:15 p.m. EST. Click here for an interactive view of the outage.

Update Jan. 10

Global outages across all three categories last week increased from 180 to 206, up 14% compared to the week prior. In the US, outages increased from 48 to 78, a 63% increase.

Globally the number of ISP outages increased from 121 to 150, up 24%, and in the US they increased from 40 to 57, up 43%.

Cloud-provider network outages dropped from five to two worldwide, but in the US they increased from zero to two.

Globally, collaboration-app network outages decreased from five to three, and rose from two to three in the US.

There were two notable outages during the week.

On Jan. 3, Oracle experienced an outage on its network affecting Oracle Cloud services in the US. The outage was divided into two occurrences over a 25-minute period. The first occurrence was observed around 5:20 a.m. EST centered on Oracle nodes in Austin, Texas, and lasted about a minute. Five minutes after appearing to clear, they began exhibiting outage conditions again that lasted 12 minutes. The outage was cleared around 5:35 a.m. EST.

On Jan. 5, Microsoft experienced an outage on its network that affected access to services running on Microsoft environments. The outage, first observed around 11:20 p.m. EST, lasted nine minutes and appeared to be centered on Microsoft nodes in Chicago, Illinois. Five minutes later, a number of the Chicago nodes appeared to recover, reducing the number of affected partners. The outage was cleared around 11:30 p.m. EST. Given the duration, timing, and location of the nodes the cause is likely to have been a maintenance exercise.

Update Dec. 13

Global outages across all three categories last week increased from 287 to 356, up 24% from the week prior. In the US, outages increased from 103 to 130, up 26%.

Globally, the number of ISP increased from 209 to 261, up 25%, while in the US, they increased from 85 to 108, up 27%.

Cloud-provider network outages worldwide dropped from 28 to 27. In the US, they increased from two to five.

Globally, collaboration-app network outages jumped from five to 13 outages, while in the US they increased from three to seven.

On December 7, AWS experienced an outage disrupting users and customers accessing its services in regions across the globe. The outage was first observed around 10:40 a.m. EST and appeared to be centered on infrastructure in the AWS US-EAST-1 region, located in Northern Virginia. It initially affected services relied upon by non-Amazon apps and services, across regions including in the US, Europe, and APJC. The impact varied depending on the user's IP address. At around 12:37 p.m. EST, Amazon announced it had identified issues related to an application programming interface (API) and were working on recovering services. At 5:43 p.m. EST, Amazon announced it had mitigated the underlying issue, and services began to return to normal. Around 6:03 p.m. EST, most services had been restored, with some disruption still being experienced on the AWS API gateway service. The disruption can be divided into two occurrences, with the first appearing to be the most prominent and lasting around an hour and four minutes; many of the services were restored around 11:44 a.m. EST. The second, lasting around 8 p.m. EST.

On December 9, NTT America experienced an outage that affected some customers and downstream partners across the US and Japan. The 54-minute outage was observed around 2:00 a.m. EST and appeared to center on NTT nodes in Ashburn, Virginia. Fifteen minutes into the outage, some of the nodes appeared to clear, leaving just downstream customers and partners located in the US affected. The outage was cleared around 2:55 a.m. EST.

Update Dec. 6

Global outages across all three categories last week decreased from 290 to 287. In the US they increased from 93 to 103.

Globally, ISP outages decreased from 234 to 209, down 11%, while in the US they increased from 79 to 85, up 8%.

Cloud-provider network outages increased from 17 to 28 worldlwide, and in the US they dropped from three to two.

Globally, collaboration-app network outages decreased from seven to five while in the US they remained at three.

There were two notable outages during the week. On November 29, Hurricane Electric experienced an outage that affected customers and downstream partners including in the US, Hong Kong, Republic of Korea, Singapore, Philippines, Malaysia, Switzerland, and Canada. The 12-minute outage was observed around 4:20 p.m. EST centered on Hurricane Electric nodes in Hong Kong. Five minutes later nodes in San Jose, California, also exhibited outage conditions, increasing the number of partners and countries affected. Around 4:30 p.m. EST, the Hong Kong nodes appeared to clear, leaving nodes in San Jose, Minneapolis, Minnesota, and Seattle, Washington, with outage conditions until the outage cleared around 4:35 p.m. EST.

At 5:55 p.m. EST on December 2, GTT Communications experienced an outage centered on GTT nodes in San Jose, California, that affected services in the US and the UK. The outage was cleared around 6:10 PM EST.

Update Nov. 29

Globally, outages across all three categories last week decreased from 388 to 290, down 25% and dropped from 153 to 93 in the US, down 39%.

Globally, the number of ISP outages last week decreased from 287 to 234, down, 18%, and from119 to 79 in the US, a 34% drop.

Worldwide, cloud-provider network outages decreased from 22 to 17, and remaind at three in the US.

Globally, collaboration-app network outages decreased from eight to seven, while in the US they dropped from six to three.

On Nov. 22, Telia Carrier experienced an outage that impacted customers and partners across countries including the US, Panama, Costa Rica, Brazil, Argentina, and Australia. First observed around 11:20 p.m. EST, the outage appeared to center on nodes in Atlanta, Georgia. Nodes in San Francisco, California, exhibited outage conditions 10 minutes and appeared to recover around 11:35 p.m. EST. The Atlanta outage continued and was cleared around 11:50 p.m. EST. Click here for an interactive view of the outage.

On Nov. 23, Cogent Communications, experienced an outage affecting providers and customers in countries, including the US, Spain, New Zealand, Mexico, Canada, and Australia. The outage played out in three occurrences over an hour and five minutes starting around 1:20 a.m. EST centered on Cogent nodes in San Francisco, Oakland, and Sacramento, California, and Washington, DC. The first occurrence lasted four minutes before all nodes appeared to recover. The second occurrence started 25 minutes later around 1:50 a.m. EST and lasted around eight minutes. It appeared to center on nodes in Sacramento. Five minutes into the second occurrence nodes in San Francisco, Oakland, and Salt Lake City, Utah exhibited outage conditions. The third occurrence started 10 minutes after the second appeared to clear and affected nodes in Atlanta, Georgia. The outage lasted a total of 21 minutes and was cleared at around 2:25 a.m. EST. Click here for an interactive view of the outage.

Update Nov. 15

Global outages across all three categories increased from 307 to 360, a 17% increase compared to the week prior. In the U.S., outages increased from 141 to 163, a 16% increase.

Globally ISP outages increased from 221 to 259, up 17%, and in the US they increased from 111 to 135, up 22%.

Globally, cloud-provider network outages increased from 16 to 27, a 69% increase, and in the US, they rose from one to two.

Globally, collaboration-app network outages rose from six to 11, and from six to nine in the US.

On Nov. 9, Comcast Cable Communications experienced two outages that affected downstream partners and customers across the US. The first outage, lasting over an hour, was observed at approximately 12:45 a.m. EST and appeared to center on Comcast nodes in Sunnyvale, California, and primarily affecting customers on the West Coast. After appearing to clear around 1:25 AM EST, they again exhibited outage conditions, before clearing 1:35 a.m. EST. The second outage observed about 8:05 a.m. lasted over an hour and intermittently impacted routes across regions including Chicago, Illinois; Pittsburgh, Pennsylvania; and Ashburn, Virginia. The outage was cleared around 9:20 a.m. EST.

On Nov. 11, NTT America experienced an outage that impacted some of its customers and downstream partners across the US, Brazil, China, Japan, and Canada. Observed around 1 p.m. EST, the 19-minute outage appeared to center on NTT nodes in Osaka, Japan. Five minutes later, nodes in San Jose,

California, also began to exhibit outage conditions. Around 1:10 p.m. EST the San Jose nodes appeared to recover, and the outage was cleared around 1:20 p.m. EST

Update Nov. 8

Global outages in all three categories increased from 278 to 307, a 10% increase compared to the week prior. In the US, however, they decreased from 147 to 141, a 4% dip.

Globally, ISP increased from 197 to 221, up 12%, and also increased in the US from 109 to 111, up 2%.

Cloud-provider network outages globally decreased from 22 to 16 outages, and in the US, dropped from five to one.

Globally, collaboration-app network outages, all of them in the US, decreased from eight to six.

Two notable outages:

On Nov. 4, Telia Carrier experienced an outage affecting customers and downstream partners across the US. The disruption lasted a total of 43 minutes, divided into two occurrences over a 55-minute period. First observed around 7:40 a.m. EDT, the first occurrence lasted 39 minutes cetnered on nodes in Phoenix, Arizona, and Los Angeles, California. Five minutes later, the Phoenix nodes appeared to recover, before appearing to exhibit outages again 10 minutes later. The Los Angenes nodes appeared to recover 35 minutes after first being observed, leaving the Phoenix nodes the only ones exhibiting outage conditions. The outage was cleared around 8:35 a.m. EDT.

On Nov. 4, Cogent Communications experienced an outage affecting some downstream providers and customers in the US, Mexico, Hong Kong, Canada, the UK, Germany, and Singapore. The 33-minute outage was observed around 10:15 p.m. EDT centered on nodes in Kansas City, Missouri, and Chicago, Illinois. After 15 minutes, nodes in Cincinnati and Cleveland, Ohio, San Francisco, California, and Denver, Colorado, also showed outage conditions. Five minutes later the Cleveland and Cincinnati nodes appeared to recover, leaving the US as the only affected country. Thirty minutes after the initial occurrance, only the Chicago nodes showed outage conditions. The outage was cleared around 10:50 p.m. EDT.

Update Nov. 1

Outages globally across all three categories decreased from 354 to 278, a 21% drop compared to the week before. In the US they decreased from 154 to 147, down 5%.

ISP outages globally decreased from 254 to 197, down 22%, and from 112 to 109 in the US, down 3%

Both globally (22) and in the US (5), cloud-provider network outages remained the same.

Collaboration app network outages increased from one to eight, all of them in the US.

There were two notable outages during the week.

On Oct. 27, Hurricane Electric experienced an outage that affected customers and partners across countries including the US, the UK, Russia, Brazil, France, Hong Kong, New Zealand, Finland, Japan, Germany, the Netherlands, and Canada. The outage was divided into eight occurrences over two hours and 10 minutes. The first, lasting around 5 minutes, was observed at around 9:29 p.m. EDT, centering on Hurricane Electric nodes located in New York, New York, and Chicago, Illinois. Around 15 minutes after it appeared to clear, the second one started. Five minutes into it, nodes in Ashburn, Virginia exhibited outages. Around 10 p.m. EDT, all the nodes appeared to recover, but 10 minutes later the nodes in Chicago began exhibiting outage conditions again for about two minutes. Fifteen minutes later, nodes in New York and Chicago again exhibited outage conditions. Nodes in those locations repeatedly appeared to recover then exhibited outage conditions for the next five occurrences. The total outage lasted around 40 minutes and was cleared at around 11:40 p.m. EDT

On Oct. 25, Rackspace Technology experienced an outage affecting some customers and partners across countries including the US, France, the UK, Spain, Singapore, Hong Kong, Vietnam, Mexico, Chile, Switzerland, Canada, and the Netherlands. The outage, lasting around 28 minutes, was observed around 10:46 a.m. EDT and appeared to center on Rackspace nodes in Chicago, Illinois. Twenty minutes later, some of the nodes apparently began to recover before clearing at around 11:15 a.m. EDT.

Update Oct. 25

Global outages across all three categories dropped from 387 to 354, a 9% decrease compared to the week prior. In the US, outages decreased from 185 to 154, down 17%.

The number of ISP outages globally dropped from 281 to 254, down 10%, and US outages dropped from 150 to 112, down 25%.

Globally, cloud-provider outages decreased from 30 to 22, down 27%, while in the US, they were cut in half, from 10 to five.

There was just one collaboration-app network outage and that was in the US. The previous week there were two outages globally.

There were two notable outages during the week.

On Oct. 19, Hurricane Electric, experienced an outage affecting customers and downstream partners across the US, Australia, the United Arab Emirates, Thailand, Malaysia, and Canada. The outage was divided into three occurrences over 34 minutes, starting at 1:51 a.m. EDT, centering on Hurricane Electric nodes in Chicago, Illinois. Around five minutes after the first occurrence appeared to clear, outage conditions appeared at nodes located in Los Angeles, California that lasted around eight minutes. The outage was cleared around 2:25 a.m. EDT.

On Oct. 21, Level 3 Communications experienced an outage affecting multiple downstream partners and customers. The outage lasted around 11 minutes total, divided between two occurrences distributed over a 25-minute period. The first lasted around eight minutes and was observed around 5:30 a.m. EDT and appeared centered on Level 3 nodes in Phoenix, Arizona. It appeared to clear, but 10 minutes later the Phoenix nodes exhibited outage conditions again. The outage was cleared around 5:55 a.m. EDT.

Update Oct. 18

Global outages across all three categories increased from 352 to 387, a 10% increase, and from 184 to 185 in the US.

The number of ISP outages increased from 270 to 281, and decreased in the US from 163 to 150.

Globally, cloud-provider network outages rose from 18 to 30, while in the US, they increased from three to 10.

Collaboration-app network outages worldwide increased from one to two, and stayed the same at one in the LIS

There were two notable outages during the week. On October 13, GTT Communications experienced an outage that affected partners and customers across countries including the US, China, the UK, Ireland, India, and Japan. The 44-minute outage was first observed around 11:10 p.m. EDT, initially center on GTT nodes in London, England, and San Jose, California. Twenty-five minutes later nodes in San Jose appeared to recover. The outage was cleared around 11:55 p.m. EDT.

On October 11, Microsoft experienced an outage on their network that affected downstream partners and access to services running on Microsoft environments. The 34-minute outage was first observed around 5:05 p.m. EDT centered on Microsoft nodes in Amsterdam, the Netherlands. Five minutes later, nodes in Frankfurt, Germany, began exhibiting outage conditions, affecting more partners. Around 5:15 p.m. EDT, the nodes located in Frankfurt appeared to recover. The outage was cleared around 5:40 p.m. EDT. Given the duration and timing, relative to the location of the nodes at the center of the outage, it is likely to have been a maintenance exercise.

Update Oct. 11

Outages across all three categories during the past week increased from 323 to 352, up 9%. In the US, outages increased from 161 to 184, a 14% increase.

Globally, ISP outages went from 239 to 270, up13%, while in the US, ISP outages increased from 132 to 163, up 23%.

Cloud provider network outages dropped from 26 to 18, down 31%. In the US, they dopped by half, from six to three.

There was one collaboration-app network outage, and that occurred in the US, dropping the worldwide and US levels from six the week before.

On Oct 4, <u>Facebook</u> 's <u>backbone network suffered an outage</u> that disconnected its data centers globally, making Facebook, Instagram, and WhatsApp unavailable to all users for more than seven hours. Initially observed around 11:40 a.m. EDT, the backbone network outage triggered a second issue: Facebook's authoritative name servers, detecting that the network connection was "unhealthy," stopped advertising

routes to Facebook's servers, rendering the services inaccessible. Facebook identified the root cause of the outage <u>as a faulty configuration</u> change and implemented a fix. Around 6:20 p.m. EDT, connectivity to services began to return, and the outage cleared around 6:45 p.m. EDT. A more detailed analysis of the outage can be found here.

On Oct. 7, Telia Carrier, a Tier 1 ISP headquartered in Stockholm, Sweden, experienced an outage affecting customers and downstream partners in the US, Spain, Germany, Austria, the UK, the Philippines, Japan, New Zealand, South Africa, the Czech Republic, Egypt, the Netherlands, India, and Canada. First observed around noon EDT, the outage initially centered on nodes in Ashburn, Virginia, and Sweden. Five minutes later the nodes in Sweden appeared to recover, while nodes in Newark, New Jersey, and London, England, began exhibiting outage conditions, increasing the number of countries and downstream partners affected. All except the London nodes appeared to recover 35 minutes after first being observed. The outage lasted an hour and 14 minutes and was cleared around 1:15 p.m. EDT.

Update Oct. 4

Global outages across all three categories last week decreased from 367 to 323, a 12% dip compared to the week prior. US outages remained the same at 161.

Globally, the number of ISP outages increased from 233 to 239, and in the US they increased from 115 to 132, up 15%.

Cloud-provider network outages worldwide dropped from 41 to 26, down 37%, while in the US they increased from four to six.

Both globally and in the US, collaboration-app network outages decreased by two, from eight to six.

There were two notable outages during the week.

On September 30, Oracle experienced an outage that affected customers and downstream partners interacting with Oracle Cloud services in the US. The outage was observed around 4:01 p.m. EDT and appeared to center on Oracle nodes in Frankfurt, Germany, and Arlington and Ashburn, Virginia. Five minutes later, all nodes except those in Arlington appeared to recover. The outage lasted 7 minutes and was cleared around 4:10 p.m. EDT.

On September 29, NTT America experienced an outage that affected some customers and downstream partners across the US, Japan, and Hong Kong. It lasted around 18 minutes total, divided between two occurrences over a 25-minute period. The first was observed at 7:10 p.m. EDT and appeared centered on NTT nodes in New York, New York. It lasted four minutes and appeared to clear at around 7:15 p.m. EDT. Five minutes later, the second occurrence, lasting 14 minutes, affected the New York nodes plus nodes in Ashburn, Virginia. The outage to nodes in New York appeared to clear 10 minutes later, and the outage in Ashburn was cleared around 7:35 p.m. EDT.

Update Sept. 27

Global outages across all three categories last week increased from 276 to 367, a 33% increase compared to the week prior. In the US, outages increased from 116 to 161, a 39% increase.

Globally ISP outages increased from 186 to 233, a 25% increase, and in the US they increased from 87 to 115, up 32%.

Cloud-provider network outages jumped from 24 to 41, up 71%, while in the US they increased from three to four.

Collaboration-app network outages increased by eight worldwide and also by eight in the US.

Collaboration-app network outages reached the highest number they have reached this year. Both globally and in the US, they were up by eight, increasing from two to 10 worldwide, and from one to nine in the US.

There were two notable outages this week.

On September 21, Oracle experienced an outage affecting customers and downstream partners in the US, Germany, Finland, Singapore, Hong Kong, Australia, and Thailand. The outage was observed around 10:25 a.m. EDT and appeared to center on Oracle nodes in Frankfurt, Germany. Fifteen minutes later some of the nodes appeared to recover, reducing the affected countries to Finland, Hong Kong, and Australia. The outage lasted 24 minutes and was cleared at around 10:50 a.m. EDT.

On September 20, Comcast Communications experienced an outage that impacted downstream partners and customers in the US, Switzerland, China, and Hong Kong. The 18-minute outage was observed around

4:50 p.m. EDT and appeared to center on Comcast nodes in Sunnyvale and Los Angeles, California; and Houston, Texas. Five minutes after it started, the disruption expanded to nodes in Santa Clara, California; New York, New York; Richmond, Virginia; Pittsburgh, Pennsylvania; and Denver, Colorado. Around 5:05 p.m. EDT, all nodes except those in New York appeared to recover The outage was cleared around 5:10 p.m. EDT.

Update Sept. 20

Global outages across all three categories during the past week increased from 209 to 276, a 32% increase compared to the week prior. In the US, outages increased from 85 to 116, a 36% increase.

Globally, the number of ISP outages increased from 149 to 186, up 25%, and in the US, they increased from 72 to 87, a 21% increase.

Cloud-provider network outages increased from 20 to 24, while in the US they increased from two to three.

Collaboration-app outages worldwide remained the same at two, and also the same in the US at one.

On September 14, Zayo Group, experienced an outage that affected some of its partners and customers in countries including the US, Hong Kong, Switzerland, and the UK. The outage lasted around 15 minutes, was first observed around 3 p.m. EDT, and appeared to center on Zayo Group nodes located in Philadelphia, Pennsylvania. Ten minutes later some of the node appeared to recover, reducing the number of impacted parties before the outage was cleared around 3:20 p.m. EDT.

On September 13, Microsoft experienced a network outage that impacted downstream partners and access to services running on Microsoft environments. The 29-minute outage was first observed around 1:25 a.m. EDT and appeared to be centered on Microsoft nodes in Des Moines, Iowa. Five minutes later, nodes located in Chicago, Illinois, showed outage conditions, resulting in an increase in the number of impacted partners. Around 1:35 a.m. EDT, nodes in Cleveland, Ohio, also showed outage conditions. Twenty five minutes after the outage was first observed, the nodes in Des Moines and Cleveland appeared to recover about 25 minutes into the outage leaving just the Chicago nodes as the only ones still out. The outage was cleared around 1:55 a.m. EDT. Given the duration and timing relative to the location of the nodes at the center of the outage, it is likely to have been a maintenance exercise.

Update Sept. 13

Global outages across all three categories last week increased by one, from 210 to 209. In the US, they decreased from 90 to 85.

ISP outages grew worldwide from 140 to 149 and grew in the US from 68 to 72.

Globally, the number of cloud-provider network outages stayed the same at 20, while in the US they dropped from seven to two.

Collaboration-app network outages remained the same at two, and in the US the number rose from zero to one.

There were two notable outages.

At 1:45 p.m. EDT on Sept. 7, Amazon's network experienced a disruption affecting downstream partners and customers in the US, Japan, South Korea, Ireland, and the Philippines. It lasted around 18 minutes distributed across two occurrences over a 35-minute period. The first instance appeared to center on Amazon nodes in Incheon, South Korea, and lasted around nine minutes affecting users in the US, the Philippines, and South Korea. Around 2:10 a.m. EDT, approximately 15 minutes after the first occurrence cleared, a second occurrence was observed, also lasted around 9 minutes, and appeared to again center on Amazon nodes located in Incheon, South Korea. It affected service in South Korea, Japan, and Ireland. The outage was cleared around 2:20 a.m. EDT.

On Sept. 6, Cogent Communications, experienced a series of outages over a half-hour period that affected downstream providers and customers in multiple countries, including the US, Spain, Greece, Germany, Luxembourg, the Ukraine, and Portugal. It lasted 13 minutes divided between two occurrences over a 25 minute period. The first occurrence was observed around 7:15 p.m. EDT centered on Cogent nodes in Sacramento, California, and Bilbao, Spain, and lasted around nine minutes. The Cogent environment was stable for 15 minutes then experienced a series of four-minute outages observed on Cogent nodes in Bilbao, Spain. The outage was cleared around 7:45 p.m. EDT.

Updated Sept. 6

Global outages across all three categories last week decreased from 286 to 210, down 26%, with most of the decline coming from improved performance in the US where the total outages dropped from 145 to 90, down 37%.

ISP outages globally dropped from 214 to 140, a 35% decrease. In the US they decreased from 119 to 68, a 43% drop.

Globally, cloud-provider outages increased from 17 to 20, while in the US they increased from five to seven.

Worldwide, collaboration-app network outages dropped by from four to two, with the decrease coming from improved performance in the US where outages dropped from two to zero.

There were two notable outages during the week.

At 2:15 a.m. EDT on Sept. 1, Microsoft experienced a 29-minute outage affecting downstream partners and services running in Microsoft environments that appeared centered on nodes in Des Moines, Iowa; Chicago, Illinois; and Spokane, Washington. Five minutes in, nodes in New York, New York; Los Angeles, California; Amsterdam, the Netherlands; Sydney, Australia; Portland, Oregon; and Cleveland, Ohio; also began exhibiting outages. Around 2:25 AM EDT, the nodes in New York, Sydney, Portland, Chicago, Spokane, and Cleveland appeared to recover. The outage was cleared around 2:45 AM EDT. Given the duration, timing, and the location of the nodes, it is likely to have been a maintenance exercise.

At 12:05 a.m. EDT on Sept. 2, Cogent Communications experienced an outage affecting multiple downstream providers and customers in the US, Brazil, Australia, Canada, Singapore, South Africa, and the K. It lasted around 14 minutes and appeared to be centered on Cogent nodes in New York, New York. Five minutes into it some of the nodes appeared to recover, reducing the number of countries affected to just the US. The outage was cleared around 4:20 AM EDT.

Updated Aug. 30

Global outages across all three categories remained fairly steady last week, increasing from 284 to 286. In the US, outages bumped up from 99 to 145 outages, a 46% increase.

Globally, the number of ISP outages increased from 193 to 214, up 11%, while in the US, they increased from 68 to 119, a 75% jump.

Worldwide cloud provider outages dropped from 33 to 17 outages, down 48%. In the US they also dropped, from 19 to 5, a 74% decrease.

Collaboration-app network outages worldwide remained at four, and decreased from three to two in the US.

There were two notable outages during the week.

On August 24, Cogent Communications experienced an outage that impacted both downstream providers as well as customers in countries including the US, New Zealand, Ukraine, Spain, Mexico, Luxembourg, Hong Kong, Singapore, the UK, Republic of Korea, Portugal, Japan, Germany, Greece, China, Philippines, Brazil, Australia, France, and Argentina. First observed around 5:35 a.m. EDT, it appeared initially centered on Cogent nodes in Los Angeles, California. Five minutes later, the location of nodes terminating traffic increased to include Phoenix, Arizona; Las Vegas, Nevada; San Francisco, San Jose, and Fullerton, California; El Paso and Houston, Texas; Atlanta, Georgia; and Hong Kong. The outage lasted 59 minutes and appeared to coincide with Cogent planned-maintenance that involved code upgrades on their infrastructure in the Los Angeles area. The outage was cleared around 6:35 a.m. EDT.

Also on August 24, Zayo Group experienced an outage affecting some of its partners and customers in countries that included the US, Canada, Singapore, India, and Hong Kong. The outage was first observed around 3 a.m. EDT and lasted around 18 minutes. Initially it appeared centered on Zayo Group nodes in Seattle, Washington, and Los Angeles, California. Five minutes later the location of nodes exhibiting outages expanded to include San Diego, California, and Phoenix, Arizona. For the next 10 minutes, the number of nodes terminating traffic began to clear until around 3:15 a.m. when the only outage conditions were in Phoenix. That outage cleared around 3:20 a.m. EDT.

Updated Aug. 23

Worldwide outages across all three categories last week increased from 275 to 284 compared to the previous week. In the US, outages increased from 85 to 99.

Globally, the number of ISP outages decreased from 200 to 193, but in the US they increased 11% from 61 to 68.

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Cloud provider network outages worldwide from 29 to 33 outages, and in the US, jumped from three to 19.

Globally and in the US, Collaboration-app network outages decreased globally from five to four and in the US from four to three.

There were two notable outages during the week.

At 4 a.m. EDT on August 18, Rackspace Technology experienced an outage affecting some of its customers and in countries including the US, Switzerland, Canada, and Germany. The outage lasted around 30 minutes in total, divided among six occurrences distributed over a period of 75 minutes. The first appeared to center on Rackspace nodes in Washington, DC, and lasted 14 minutes before appearing to clear at around 4:15 a.m. EDT. Five minutes later a series of four outages were observed, each lasting around four minutes with a period of five minutes between each, still appearing to center on nodes in Washington. The final occurrence was observed around 5:10 a.m. EDT, before clearing around 5:15 a.m. EDT.

At 6 p.m. on August 18, NTT America experienced an outage affecting customers and downstream partners across the US and Canada. It lasted about six minutes and was divided into two occurrences over a 15 minute period, appearing to center on NTT nodes in Seattle, Washington. It was cleared around 6:15 p.m. EDT.

Updated Aug. 16

The total number of outages worldwide across all three categories increased from 201 to 275 during the past week, up 37%, while in the US they rose from 65 to 85, up 31%.

Globally the number of ISP outages increased from 149 to 200, a 34%, rise and in the US went up from 51 to 61, a 20% increase.

Worldwide cloud-provider network outages jumped from 11 to 29, a 163% increase, and in the U.S., increased from two to three.

Globally, collaboration-app network outages increased from one to five outages, while the number in the us went from zero to four.

There were two significant outages during the week. At 7:40 p.m. on Aug. 11, Telia Carrier experienced an outage affecting customers and downstream partners across countries including the US, Germany, France, the UK and Canada. It appeared to center on nodes in London, England. Five minutes later, a number of those nodes appeared to recover, reducing the number of countries impacted by the outage to the UK, Germany, the US, and France. The outage lasted 21 minutes and was cleared around 8:05 p.m. EDT.

At 5:35 a.m. on August 12, GTT Communications experienced an outage that affected partners and customers across countries including the US, India, Japan, Spain, the UK, and the Netherlands. It lasted around 11 minutes and appeared to center on GTT nodes in Seattle, Washington. It was cleared around 5:50 AM EDT.

Updated Aug. 9

Global outages across all three categories decreased from 278 to 201, a 28% decrease compared to the week prior. In the US, they decreased from 131 to 65 outages, a 50% drop.

Globally, the number of ISP outages decreased from 191 to 149, down 22%, and in the US, they decreased from 103 to 51, a 50% drop.

Worldwide cloud-provider network outages dropped from 22 to 11, a 50% decrease compared to the week prior, and in the US decreased from 5 to 2.

Globally collaboration-app-network outages decreased from four to one and in the US from two to zero.

There were two significant outages during the week. At 2:15 a.m. EDT on August 3, Microsoft experienced an outage on their network that affected some downstream partners and access to services running on Microsoft environments. The 29-minute outage appeared to be centered on Microsoft nodes in Des Moines, Iowa. Ten minutes later, nodes in Chicago, Illinois and Cleveland, Ohio also began exhibiting outage conditions. Around 2:35 a.m. EDT, the Chicago and Cleveland nodes appeared to recover, leaving those in Des Moines and Portland, Oregon, as the only ones exhibiting outage conditions. The outage was cleared around 2:45 a.m. EDT. Given the duration and timing relative to the location of the nodes involved, it is likely to have been a maintenance exercise.

At 1:20 a.m. EDT on August 6, Hurricane Electric experienced an outage affecting customers and downstream partners in countries including the US, Ireland, the UK, Finland, the Netherlands, France, Russia, South Africa, Germany, India and Canada. The outage was divided into two occurrences over a 55-minute period. The first period lasted around 8 minutes centering on nodes in New York, New York. Around 10 minutes after it appeared to clear, the second occurrence was observed again in York but also in Los Angeles, California, and Ashburn, Virginia. Five minutes into the second occurrence, nodes in Atlanta, Georgia, and Paris, France, also began exhibiting outage conditions. Around 2 a.m. EDT, the nodes in Paris appeared to recover, but Chicago, Illinois, and San Jose, California exhibited outage conditions for the next five minutes. All the nodes except those in New York and Ashburn appeared to recover. This second occurrence lasted around 33 minutes and had the biggest impact in terms of countries affected. The total outage lasted around 55 minutes and was cleared around 2:15 a.m. EDT.

Updated Aug. 2

Globally the total of outages in all three categories increased from 251 to 278, an increase of 11% compared to the previous week. In the US, they increased from 129 to 131.

The number of ISP outages globally remained the same at 191, while in the US they dropped from 105 to 103.

Cloud-provider network outages jumped from 12 to 22 worldwide, an 83% increase, and increased from two to five in the US.

Globally, collaboration-app network outages decreased from six to four, and in the US they dropped from three to two.

There were two notable outages during the week.

At 4:15 p.m. EDT on July 27, NTT America experienced an outage that impacted some of its customers and partners across countries including the US, Ireland, Canada, France, South Africa, Germany, UK, Singapore, Japan, Spain, Sweden, Italy, Brazil, Republic of Korea, and the Netherlands. After about 15 minutes, NTT America nodes located in Paris, France, began exhibiting outage conditions. About 4:35 p.m. EDT, the node in Paris appeared to recover. Around 4:40 p.m. EDT, nodes located in New York, New York also began exhibiting outage conditions, but appeared to recover five minutes later. The number of countries and nodes hit by the outage continued to decrease until it appeared to clear around 5:25 p.m. EDT. Five minutes later the nodes in London began exhibiting outage conditions again. The issue was cleared around 5:35 PM EDT.

At 8:50 a.m. EDT on July 29, NetActuate experienced an outage affecting multiple downstream partners and customers in the US. The outage lasted around 18 minutes and appeared to center on NetActuate nodes in Dallas, Texas. Fifteen minutes later the number of affected nodes in Dallas appeared to drop and with it the number of affected customers and partners. The issue was cleared around 9:10 a.m. EDT.

Updated July 19

Global outages across all three categories during the past week decreased from 309 to 295, down 5%. In the US they were up one from 135 to 136.

ISP outages globally decreased from 225 to 212, down 6%, while in the US they decreased from 113 to 106, also a 6% drop.

Cloud-provider network outages overall increased from 31 to 36. In the US, they jumped from four to 11.

Collaboration-app network outages dropped from seven to one worldwide, and from two to one in the US.

At 3:40 a.m. EDT on July 12 AT&T experienced an outage that affected customers in the US, U.K, Japan, Germany, Canada, Australia, India, Brazil, Republic of Korea, Switzerland, and the Netherlands. The outage centered on AT&T nodes located in Phoenix, Arizona, and lasted 14 minutes.

Updated June 28

Global outages in all three categories last week dropped from 427 to 212, a 50% decrease compared to the week before. In the U.S., outages dropped from 275 to 86, a 69% decrease.

Globally, the number of ISP outages decreased from 352 to 147, a 58% drop, while in the US they fell from 250 to 59, a 76% decrease.

Cloud-provider network outages dropped from 23 to 15, down 35% worldwide compared to the week prior. In the US, they dropped from four to two.

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Globally, collaboration-app network outages increased from six to eight, and from four to seven in the US.

There were three notable outages this week.

At 12:50 a.m. EDT on June 22, Internap experienced an outage affecting downstream partners and customers in countries including the US, the UK, Japan, Australia, Singapore, Germany, India, Israel, Italy, and Hong Kong. The outage lasted 24 minutes and centered on Internap nodes in New York, New York, and peaked during the first five minutes. It was cleared around 1:15 a.m. EDT.

At 3:10 p.m. EDT on June 24, Amazon experienced an interruption that impacted downstream partners and customers in countries including the US, the UK, Australia, South Africa, India, Japan, Mexico, Germany, and the Philippines. The 17-minute outage appeared to center on Amazon nodes in Columbus, Ohio, and the number of countries affected was at its highest for the first 10 minutes, decreased steadily until the last seven minutes when it appeared to affect only the US, India and the Philippines. The outage was cleared around 3:35 p.m. EDT.

At 7:20 p.m. EDT on June 23, TATA Communications (America) experienced an outage that impacted downstream partners and customers in countries including the US, Australia, India, Japan, Brazil, the UK, Germany, Canada, the Netherlands, and Switzerland. The outage lasted around 12 minutes and appeared to center on TATA nodes in Montreal, Canada, and Chicago, Ilinois. It was cleared around 7:35 PM EDT.

Updated June 21

Global outages across all three categories last week increased from 332 to 427, up 29% from the week before. In the US, total outages jumped from 173 to 275, a 59% increase.

Worldwide the number of ISP outages increased from 263 to 352, a 34%. In the US they increased from 146 to 250, a 71% increase.

Cloud provider network outages globally more than doubled for the second week in a row, from 10 to 23. In the US, cloud-provider network outages decreased from five to four.

Globally, collaboration-app network outages decreased from seven to six outages, while in the US they increased from three to four.

There were two significant outages during the week.

About 12:20 a.m. EDT on June 17, Akamai's DDoS mitigation service, Prolexic Routed, experienced a service disruption that made its customers' websites, including major financial services firms and airlines, unreachable. The outage affected many of the approximately 500 Akamai Prolexic customers that use the service. During the incident, there appeared to be a massive surge in network outages that also coincided with application availability issues. Akamai identified the cause as the Prolexic routing process. The outage was most severe in its initial minutes, but lasted until about 4:22 a.m. EDT.

About 2:40 p.m. EDT on June 15, Cogent Communications experienced an outage that affecting downstream providers as well as Cogent customers in the US. The outage lasted around 35 minutes divided into three occurrences over the period of an hour. The first occurrence appeared centered on Cogent nodes in Chicago, Illinois, and Atlanta, Georgia. The outage appeared to clear around 2:45 p.m. EDT but reappeared five minutes later. Fifteen minutes into the outage the nodes in Atlanta, GA appeared to recover, leaving only the Cogent nodes located in Chicago exhibiting outage conditions. This continued for another four minutes before appearing to clear. The third occurrence of the outage was observed around 3:10 p.m. EDT centered at Cogent Chicago nodes. This third occurrence was the longest of the three, lasting around 24 minutes. The outage was cleared around 3:35 p.m. EDT.

Updated June 14

Total outages across all three categories last week jumped from 222 to 332, a 50% increase compared to the week prior. In the US, outages more than doubled from 80 to 173, a 116% increase compared to the week prior.

The number of ISP outages worldwide went from 182 to 263, a 45% increase. In the US they increased from 71 to 146, a 106% increase.

Cloud-provider network outages globally more than doubled from four to 10 outages, and in the US the grew from zero to five.

Globally, collaboration-app network outages jumped from one to seven, and in the US, from zero to three.

There were two notable outages during the week. Around 5:50 a.m. EDT on June 8, Fastly suffered a major outage that impacted the sites and applications of many of its customers. The outage, lasting about an hour, caused users to have issues loading content and accessing sites around the globe. Not all customers were affected for the full hour because they were able to use alternative services to deliver content to users. Around 6:27 a.m. EDT, Fastly announced it had identified the source of the outage, and around 6:50 a.m. announced that all services had been restored and the outage was cleared. An in depth view of the outage can be found here.

About 1:10 a.m. EDT on June 9, Zayo Group experienced an outage that affected some of its partners and customers in countries including the US, Germany, the Netherlands, Canada, the UK, Austria, Hong Kong, Australia, Brazil, Japan, Russia and Malaysia. The outage lasted around 54 minutes and appeared to center on Zayo nodes in Denver, Colorado, and Salt Lake City, Utah. Five minutes later, the Salt Lake City nodes appeared to recover but outage conditions started in nodes in Seattle, Washington, and London, UK. Thirty minutes into the outage it grew to include nodes in Chicago, Illinois, before being cleared around 2:10 a.m. EDT.

Updated June 7

Global outages across all three categories last week decreased from 265 to 222, a 16% decrease. In the US they dropped from 128 to 80, a 38% decrease.

ISP outages globally last week decreased from 211 to 182, a 14% decrease, while in the US they decreased from 105 to 71, a 32% decrease.

Globally, cloud provider network outages decreased from 9 to 4 and from two to zero in the US.

Collaboration-app network outages worldwide dropped from six to one and in the US dropped from five to none.

About 3 a.m. EDT on June 2, the ISP PCCW, experienced a 19-minute outage impacting some of its customers and networks in the US. It appeared to center on PCCW infrastructure located in Ashburn, Virginia, and was cleared around 3:25 a.m. EDT.

Around 6:45 p.m. on June 1, Microsoft experienced a 29-minute outage that impacted some downstream partners and access to services running on Microsoft environments. It appeared to be centered on Microsoft nodes located in Dublin, Ireland and was cleared around 7:15 p.m. EDT. Given the duration and timing relative to the location of the nodes at the cente of the outage, it is likely to have been a maintenance exercise

Around 1:05 a.m. EDT on June 1, Flag Telecom Global Internet experienced an outage on their network that lasted around an hour and 51 minutes over a three-hour period. It affected customers and downstream partners in countries including the US, Australia, India, France, the Netherlands, Singapore, the Philippines, Hong Kong, Germany, Brazil, and Taiwan. It appeared to be centered on Flag Telecom nodes located in Singapore. Five minutes after the initial outage, Flag Telecom nodes in Hong Kong also exhibited outage conditions and coincided with an increase in the number of impacted countries, customers, and partners. After a further five minutes, the nodes located in Hong Kong appeared to recover for 10 minutes before exhibiting outage conditions again for five more minutes. Flag Telecom nodes located in Singapore also appeared to recover about 50 minutes after the initial outage. Around 2 a.m. EDT, the nodes located in Singapore again begin exhibiting outage conditions. A series of varying-duration outages, all centered on Singapore nodes, were observed for the next two hours. The outage was cleared around 4:05 a.m. EDT.

Update May 31

Global outages across all three categories last week decreased from 363 to 265, a 27% drop, while in the US they decreased from 197 to 128, a 35% decline.

ISP outages globally decreased from 284 to 211, down 26%. In the US they decreased from 175 to 105, a 40% drop.

Worldwide cloud-provider network outages decreased from 12 to 9 outages, and remained the same in the US with two.

Globally, collaboration-app network outages increased from five to six, and in the US they increased by two, from three to five.

There were two major outages during the week. At 12:15 a.m. EDT on May 26, Verizon Business experienced an outage affecting customers and partners across countries including the US, Ireland, Poland, the Netherlands, Canada, the UK, Germany, and India. The outage appeared to be centered on

Verizon Business nodes in New York, New York, and was divided into two occurrences spanning 45 minutes. The first lasted around nine minutes and initially appeared to be clearing, with the number of affected parties dropping, but about 20 minutes later the outage returned and lasted about 23 minutes, again centered on nodes in New York.

Around 1:35 p.m. EDT May 26, Cogent Communications experienced a series of outages totalling 48 minutes over the span of an hour and 10 minutes that impacted downstream providers and customers globally. The initial outage centered on Cogent nodes in Las Vegas, Nevada, and lasted around 12 minutes. Then the Cogent environment was stable for 10 minutes before experiencing a second occurrence on nodes in Dallas and Houston, Texas. Five minutes later, the Cogent node located in Dallas appeared to recover, but nodes in Kansas City, Missouri, experienced outages. After five more minutes the Kansas City nodes recovered, but nodes in Denver, Colorado, experienced outages. Forty-five minutes after the initial outage was observed, a 24-minute outage was observed on nodes in Dallas, Houston, and Kansas City. Ten minutes into the third occurrence, the number of locations exhibiting outage conditions expanded to include Salt Lake City, Utah, Oklahoma City, Oklahoma, and Denver. As the Cogent nodes involved increased, so did the number of customer networks that were affected. The outage was cleared around 2:45 p.m. EDT.

Update May 24

Global outages across all three categories jumped from 252 to 363, last week, a 44% increase. In the U.S. outages increased from 123 to 197, a 60% increase.

Globally, ISP outages jumped from 180 to 284, up 58%, while in the US, ISP outages increased from 98 to 175, up 79%.

Worldwide, cloud-provider network outages declined slightly from 14 to 12 outages, but in the US, they increased from one to two.

Collaboration-app network outages worldwide increased from three to five, and in the US increased from one to three.

There were three notable outages during the week.

Around 1:30 p.m. on May 20, Slack experienced an interruption to its business-communication platform that lasted about 25 minutes and affected users accessing the services. A number of internal server errors were observed. Slack identified the cause as a code change that inadvertently affected some workspaces. Slack reverted the change and restore services by 1:55 p.m. EDT.

About 8:55 a.m. EDT on May 19, Coinbase experienced an interruption that lasted about two hours and affected global access to the Coinbase site and application. Connectivity and access across the network appeared to be unimpaired during the interruption, with initial requests simply timing out with system errors indicating system congestion. An hour and half after the outage was first observed, services began to be restored, with access in APAC and EMEA still affected. The outage was cleared around 10:45 a.m. EDT.

On May 17, Hurricane Electric experienced an outage that was divided into three instances over an hour and a half that affected users across countries including the US, Australia, Singapore, Hong Kong, the UK, Brazil, Germany, South Africa, the Netherlands, and Canada. The first period was observed around 1:43 p.m. EDT centered on Hurricane Electric nodes in San Francisco and San Jose, California. After five minutes, the San Francisco nodes appeared to recover, reducing the scope of the outage. But five minutes after that, San Francisco nodes exhibited outage conditions again. Five minutes after this occurrence cleared, a second one lasting three minutes was observed centered on the San Jose and San Francisco nodes. Around 2:15 p.m. EDT, the nodes appeared to recover, temporarily clearing the outage, but an hour later, those two nodes exhibited outage conditions again before clearing after eight minutes. The total outage lasted around 26 minutes and was cleared around 3:25 p.m. EDT.

Update May 17

Global outages across all three categories last week increased from 237 to 252, up 6%, while in the US, they increased from 95 to 123, a 29% jump.

ISP outages globally increased from 168 to 180, and in the US they increased from 76 to 98.

Cloud-provider network outages worldwide increased from 13 to 14 but dropped from four to one in the US.

Globally, collaboration app network outages dropped from four to three, and in the US from two to one.

There were three significant outages this week.

About 3:30 p.m. on May 12, NetActuate experienced an outage affecting downstream partners and customers in the US. It lasted around 13 minutes overall, divided into two occurrences spanning a 30-minute period. The first lasted four minutes and appeared to center on NetActuate nodes located in Raleigh, North Carolina. The outage reappeared 15 minutes later and lasted nine minutes and centered on the Raleigh nodes and nodes in Durham, North Carolina, increasing the number of customers affected. The nodes in Durham cleared five minutes into the second period of the outage. The outage was cleared around 4:05 p.m. EDT.

About 10:15 p.m. EDT on May 13, TATA Communications (America) experienced an outage affecting downstream partners and customers in countries including the US, the UK, Australia, India, China, Germany, the Netherlands, Japan, Hong Kong, Brazil, Switzerland, Republic of Korea, and Canada. The outage lasted 35 minutes and was divided into two periods over 55 minutes. The first period lasted around nine minutes and appeared to be centered on TATA nodes in Tokyo, Japan. About 10 minutes after it cleared, the outage reappeared, centering on TATA nodes located in Hong Kong and after another five minutes expanding to TATA nodes in Los Angeles, California. The nodes in Hong Kong appeared to clear after 15 minutes, leaving just the Los Angeles nodes exhibiting outage conditions. This second period of the outage lasted 26 minutes and was cleared around 11:10 p.m. EDT.

About 5:10 p.m. EDT on May 11, Salesforce experienced an interruption that left users able to reach the Salesforce front-end, but experiencing issues logging on and navigating to the Salesforce Sales Cloud, Marketing Cloud, Commerce Cloud, and Experience Cloud. That indicated internet and network connectivity for end users was functioning. Salesforce identified issues with its domain name system that had a cascading effect on its services. A fix was implemented around 7:45 p.m. EDT, and the outage was cleared about 10:15 p.m.EDT.

Update May 10

Global outages across all three categories last week decreased from 243 to 237, while in the US they decreased from 117 to 95.

Globally, the number of ISP outages increased by one, from 167 to 168. In the US they dropped from 100 to 76, a 24% decrease compared to the week prior.

Cloud provider network outages dropped 52% from 27 to 13 worldwide. In the US, they doubled from two to four.

Collaboration app network outages increased from three to four globally and stayed at two in the US.

There were two notable outages during the week.

Around 6 p.m. EDT on May 3, Cloudflare experienced a disruption to its Magic Transit service when some customers began experiencing significant packet loss at Cloudflare's network edge. The outage appeared to impact Cloudflare's infrastructure across the globe, with packet loss occurring at varying levels for approximately two hours. At around 8 p.m. EDT, Cloudflare began implementing a fix for the issue, and announced that it was resolved just after 9 p.m. EDT.

Around 3:35 a.m. EDT on May 7, PCCW experienced an outage impacting some of its customers and networks in multiple countries including, the US, Australia, Brazil, and China. The outage lasted around 22 minutes and was divided into two periods over a half-hour span, the first of which appeared to center on PCCW infrastructure located in Ashburn, Virginia. It lasted about 18 minutes. Five minutes later it recurred, again centered in Ashburn, but with the outage condition including infrastructure in New York, New York. It lasted lasted around 4 minutes and was cleared around 4:05 a.m. EDT.

Update May 3

The number of outages globally across all three categories decreased slightly last week from 246 to 243. In the US, outages decreased from 123 to 117.

The number of ISP outages worldwide increased from 162 to 167, while in the US they increased from 92 to 100.

Cloud-provider network outages remained at 27 overall and went down in the US from five to two.

Globally, collaboration-app network outages remained at three and dropped from three to two in the US.

There were three notable outages during the week.

At 7:36 a.m. EDT on April 27, TATA Communications (America), experienced an outage affecting many of its downstream partners and customers in countries including the US, Australia, India, Japan, and the Page 39 of 209 © 2022 Factiva, Inc. All rights reserved.

Philippines. The outage affected TATA nodes in Ashburn, Virginia, and appeared to clear after five minutes, but came back around 8 a.m. EDT centered on TATA nodes in Chicago, Illinois, and Los Angeles, California. The Chicago nodes appeared to recover 10 minutes later, leaving only the nodes in Los Angeles exhibiting outage conditions. About 10 minutes after that, nodes in Hong Kong began exhibiting outage conditions. In total, the outage lasted around 29 minutes, divided into two occurrences over the course of an hour and was cleared around 8:25 a.m. EDT.

AT 12:40 a.m. EDT on April 29, Hurricane Electric experienced an outage affecting users across countries including the US, Spain, Russia, and Ireland. It affected Hurricane Electric nodes in Ashburn, Virginia, and New York, New York. After five minutes, the nodes in New York appeared to recover, reducing the impact to US users only. Around 12:50 a.m. EDT, the nodes in Ashburn appeared to recover, temporarily clearing the outage. But five minutes later the nodes located in New York began exhibiting outage conditions again before clearing after three minutes. The total outage lasted around 11 minutes, consisting of two periods over half an hour. The issue was cleared around 1 a.m. EDT.

Around 6 a.m. EDT on April 27, Microsoft experienced an outage that affected its Teams users globally for about an hour and a half. The outage occurred outside of business hours for much of the Americas, but its global nature resulted in service disruption for users connecting from Asia and Europe. During the outage other Microsoft services continued to be reachable and available, but Teams services appeared unable to authenticate connection requests. Check out the ThousandEyes Internet Report for a deeper dive into the outage.

Update April 16

Globally the number of ISP outages moved from 160 to 162. In the US they moved from 85 to 92, an 8% increase.

Cloud provider network outages overall dropped by one, from 28 to 27. In the US they increased from two to five.

Collaboration-app network outages globally dropped from eight to three, and in the US from five to three.

There were two notable outages during the week.

At 11:10 p.m. EDT on April 20, Internap experienced an outage that hit many of its downstream partners and customers in countries including the US, the UK, Japan, Australia, Singapore, Germany, and Hong Kong. It lasted 18 minutes and centered on Internap nodes in New York, New York. The outage peaked 10 minutes later and was cleared around 11:30 p.m. EDT.

At 11:35 a.m. EDT on April 21, Zayo Group experienced an outage affecting partners and customers in countries including the US, China, Mexico, Canada, Hong Kong, Germany, Sweden, Brazil, India, and Singapore. It lasted around 24 minutes over a one-hour period and appeared to initially center on Zayo Group nodes in Atlanta, Georgia; Salt Lake City, Utah; and Denver, Colorado. A second occurrence started about 25 minutes later and lasted about four minutes. The outage expanded to include Zayo nodes located in Toronto, Canada, and that coincided with an expansion of affected countries and partners. Ten minutes after that, a third, three-minute occurrence centered on Zayo nodes in San Francisco, California, and affected a handful of countries. The final period of the outage was observed around 12:20 p.m. EDT centered on Zayo nodes in Phoenix, Arizona, and lasted 15 minutes. It appeared to affect only US-based customers and partners. The outage was cleared around 12:40 p.m. EDT.

Update April 19

Global outages in all three categories rose from 214 to 245, up 14% over the previous week, and from 88 to 106, up 20%, in the US.

The number of ISP outages worldwide increased from 137 to 160, a 17% increase, and in the US from 73 to 85, a 16% increase.

Cloud-provider network outages globally went from 12 to 28, a 133% jump, and in the US they increased from 1 to 2.

Worldwide collaboration-app network outages increased from two to eight, a 300% increase, while the US, outages jumped from zero to five.

There were two notable outages during the week. Around 4:46 p.m. EDT on April 12, TATA Communications (America) experienced an outage that impacted many of its downstream partners and customers in countries including the US, the UK, Australia, India, Brazil, Germany, the Netherlands, Japan,

Switzerland, Republic of Korea, and Canada. The outage, lasting around nine minutes, appeared to be centered on TATA nodes located in Tokyo, Japan. The outage was cleared around 5:10 p.m. EDT.

Around 8:45 a.m. EDT on April 14, Zayo Group experienced an outage that affected some of its partners and customers in multiple countries. The outage lasted around 36 minutes, was first observed in Zayo nodes in Atlanta, Georgia. Five minutes later the outage expanded to include nodes in Seattle, Washington, and Chicago, Illinois, which expanded the area affected from just the US to include the UK, Russia, Singapore, India, and Canada. Five minutes after that, nodes in Houston, Texas, became involved and customers in Australia were affected. Around 9:10 a.m. EDT, nodes located Denver, Colorado, were affected. This appeared to be the peak of the overall effects of the outage. Thirty minutes into the outage, the Denver node appeared to recover, reducing the number of affected countries and downstream partners. The outage was cleared around 9:25 a.m. EDT.

Update April 12

The number of outages last week across all three categories increased slightly from 210 to 214, up 2% compared to the week prior. In the US they decreased from 93 to 88, down 5%.

Globally, the number of ISP outages decreased from 143 to 137, a 4% decrease, and in the US they decreased from 74 to 73.

Cloud-provider network outages worldwide increased from nine to 12, up a third, while in the US they decreased from three to one, down two thirds.

Globally, collaboration-app network outages increased from one to two. In the US they dropped from one to zero.

There were two notable outages during the week. At 2:35 a.m. EDT on April 8, NTT America, experienced a 34-minute outage that affected some customers and downstream partners across countries including the US, Australia, Canada, France, India, Germany, UK, Switzerland, Japan, Hong Kong, and the Netherlands. The outage appeared initially to be centered on NTT America nodes in Newark, New Jersey, and Paris, France. The issue was cleared around 3:10 a.m. EDT.

About 10 p.m. EDT on April 6, AT&T experienced an outage on its network affecting customers in countries including the US, UK, Japan, Germany, Canada, Australia, India, Brazil, Republic of Korea, Switzerland, and the Netherlands. The outage centered on AT&T nodes in Phoenix, Arizona, lasted 24 minutes, and was cleared around 10:25 p.m EDT.

Update April 5

Global outages across all three categories decreased over the last week from 282 to 210, down 26%, and in the U.S., fell from 119 to 93, a 22% decrease.

The number of ISP outages globally dropped from 204 to 143, a 30% decrease and decreased in the US from 96 to 74, which is 23%.

Globally, cloud-provider outages went from 20 to 9, a 55% decrease. In the US outages went from four to three.

Worldwide, collaboration-app network outages dropped from seven to one and decreased from 2 to 1 in the US.

There were three notable outages during the week.

At 7 a.m. EDT on March 30, Cogent Communications experienced a 44-minute outage that affected multiple downstream providers, as well as Cogent customers globally. The outage appeared to be centered on Cogent nodes in El Paso, TX, Washington DC, and Phoenix, AZ. Five minutes in, the number of Cogent nodes exhibiting outage conditions increased to include nodes located in Salt Lake City, UT, Houston, TX, San Francisco, CA, and Los Angeles, CA. Fifteen minutes in, just those in Los Angeles, CA, San Francisco, CA, and Washington DC still exhibited outage conditions. Twenty minutes in, nodes in San Francisco, CA, and Los Angeles, CA recovered, but the Washington DC nodes remained out for a further 24 minutes.

Around 9:45 p.m. EDT on March 31, the AT&T network experienced an outage that impacted AT&T customers in multiple countries, including the US, UK, Japan, Germany, Canada, Australia, India, Brazil, Republic of Korea, Switzerland, and the Netherlands. IT centered on AT&T nodes in Phoenix, AZ, and lasted 18 minutes.

On April 1, Microsoft experienced an interruption that impacted customers in multiple countries, including the US, UK, Germany, Poland, Belgium, the Netherlands, Australia, Sweden, Japan, France, Ireland, China, Turkey, and the Ukraine. First observed around 5:30 p.m. EDT, the outage appeared to impact availability of Microsoft Azure DNS services. The outage lasted 24 minutes, with full availability being restored around 6:00 p.m. EDT.

Update March 29

Global outages across all three categories decreased from 300 to 282, down 6% from the previous week, and in the US they dropped from 143 to 119, a 17% decrease.

ISP outages globally increased from 197 to 204, a 4% increase. In the US they dropped from 106 to 96, a 9% dip.

Cloud-provider network outages went down from 26 to 20, a 23% decrease, and in the US decreased from five to four.

Globally, collaboration-app network outages increased from four to seven, a 75% increase. In the U.S., they moved up from one to two.

There were two notable outages during theweek. On March 23, Level 3 Communications, experienced an outage that impacted multiple downstream partners and customers in multiple countries including the US, Malaysia, the UK, the Netherlands, Brazil, India, the Czech Republic, Canada, France, Japan, and Australia. The 18-minute outage was first observed around 11:30 a.m. EDT and appeared centered on Level 3 nodes located in London,UK. During the outage, the number of affected nodes in London incrementally decreased, with the outage cleared around 11:50 a.m. EDT. Click here for an interactive view of the outage.

March 24, Zayo Group experienced a 24-minute outage that affected some of its partners and customers in the US. It was observed around 2:35 p.m. EDT and appeared to center on Zayo Group nodes located in Los Angeles, CA. The outage was cleared around 3 p.m. EDT. Click here for an interactive view of the outage.

Update March 22

Globally, outages in all three categories increased from 281 to 300, up 7%. In the US they increased from 137 to 143, 4 %.

The number of ISP outages decreased from 203 to 197, a 3% decrease, while in the US, the drop went from 108 to 106, a 2% decrease.

Cloud-provider network outages went up from 11 to 26, a 136%, but in the US they decreased from six to five.

Collaboration-app network outages increased two to four, and in the US remained at one.

A notable outage occurred on March 17 when Cloudflare suffered an interruption that impacted its customer in the northwest Pacific region of the US and Canada. The 33-minute outage over a one-hour period, was first observed around 10:20 a.m. EDT and appeared to center on Cloudflare nodes located in Kansas City, MO. This first portion of the outage lasted around three minutes. Fifteen minutes later there was a 22-minute incident centered on Cloudflare nodes located in Seattle, WA. Forty minutes after the outage was first observed, two more were observed, again centering on Cloudflare nodes in Seattle, WA. It was cleared around 11:25 a.m. EDT. Click here for an interactive view of the outage.

Update March 14

Outages in all three categories worldwide during the previous week were down from 385 to 281, a 27% decrease. In the US, they dropped from 168 to 137, an 18% change.

Globally the number of ISP outages decreased from 281 to 203, down 28%, and from 132 to 108 in the US, down 18%.

Cloud-provider outages fell from 26 to 11 worldwide, a decrease of 58%. In the US, they rose from four to six

Collaboration-app network outages worldwide fell from five to two, and in the US from five to one.

On March 10, Dynamic Network Services experienced an interruption that resulted in DNS-resolution degradation on their Dyn Managed DNS service. The disruption affected users in countries including the

UK, South Africa, Singapore, Australia, Ireland, France, Spain, and Portugal. The 55-minute outage was first observed around 6:40 p.m. EST and appeared to be centered on Dyn nodes located in London, UK. Twenty minutes later, a second Dyn node in Manchester, NH, showed outage conditions. The appearance of this second Dyn node coincided with a Dyn notification that their engineers had identified the issue and had implemented a fix. Twenty-five minutes into the outage, only the Dyn node located in London, UK, was exhibiting outage conditions and the number of affected services began to reduce, indicating the service was recovering. The outage was cleared around 7:35 p.m. EST. Click here for an interactive view of the outage.

On March 11, NTT America experienced an outage affecting some of its customers and downstream partners across countries including, the US, Australia, Canada, France, India, Germany, UK, Switzerland, and the Netherlands. The 20-minute outage was first observed around 3:05 p.m. EST and appeared to be centered on NTT America nodes located in Ashburn, VA, and Los Angeles, CA. Five minutes into the outage, the countries affected were reduced to just the US, UK, the Netherlands, and Germany, accessing downstream NTT networks. Five minutes later the outage cleared at the Ashburn, VA, node leaving just the node in Los Angeles, CA, exhibiting outage conditions. That outage was cleared around 3:30 p.m. EST. Click here for an interactive view of the outage.

Update March 7

Outages in all three categories worldwide fell from 393 to 385, a 2% decrease compared to the week before. In the US, they decreased from 184 to 168, 9% fewer.

Globally, the number of ISP outages decreased from 311 to 281, a 10% decline, while in the US they decreased from 166 to 132, down 20%.

Cloud provider outages worldwide increased from 22 to 26, an 18% increase, and the change in the US was an increase from two to four.

The number of collaboration-app network outages jumped from two to five, all of them in the US.

There were two notable outages during the week. On March 3, UUNETVerizon experienced an outage that impacted many of its peers and customers, including, Bank of America, JP Morgan Chase, Nomura, Samsung, and Zoom. The outage, lasting around 36 minutes over a 75 minute period, was first observed around 9:00 a.m. EST and appeared to center on UUNETVerizon nodes in Philadelphia, PA, and Ashburn, VA. This initial part of the outage lasted around 4 minutes and appeared to have a cascading impact on Cogent infrastructure located in New York, NY, and affected Cogent's path to the JP Morgan Chase network. Approximately five minutes after the initial outage cleared, a second was observed that lasted around 13 minutes. It was observed on UUNETVerizon nodes located in Seattle, WA and Dallas, TX, as well as appearing to have a cascading impact in Level 3 Communications infrastructure located in Seattle, WA, and affecting Level 3 customers and partners in Canada. Five minutes into this second period, the Level 3 infrastructure direct outage cleared and after another five minutes, the only UUNETVerizon nodes exhibiting the issue were located in Dallas, TX. Around 9:50 a.m. EST, the third occurrence of the outage was observed 20 minutes after the second. This outage lasted around 19 minutes and was initially focused on UUNETVerizon infrastructure in Dallas, TX. Five minutes into the third period of the outage, UUNETVerizon infrastructure exhibiting problems expanded to include Seattle, WA. Approximately 10 minutes into this third period of the outage, UUNETVerizon infrastructure located in San Jose, CA was added to those in Seattle, WA, and Dallas, TX. At around 10:10 AM ET, the UUNETVerizon infrastructure located in San Jose, CA, was the only infrastructure exhibiting issues. The outage was cleared around 10:15 AM ET. Click here for an interactive view of the outage.

On March 3, PCCW experienced an outage affecting some of its U.S. customers and networks, including Flagstar Bank, Target, Bloomberg, Morgan Stanley, and Dell. The outage lasted around 31 minutes and was divided into three periods over an hour and 20 minutes. The outage was first observed around 8:45 a.m. EST and appeared to center on PCCW infrastructure located in Ashburn VA. The first period of the outage lasted around 9 minutes, before recurring 15 minutes later, again centered on PCCW infrastructure located in Ashburn, VA. This second outage lasted around 19 minutes. The third period was observed 30 minutes after the second ended and lasted around 9 minutes. The outage was cleared around 10:05 a.m. EST.

Click here for an interactive view of the outage.

Update March 1

Global outages across all three categories jumped from 279 to 393, a 41% increase over the week before. In the US outages went from 138 to 184, up 33%.

ISP outages rose from 233 to 311, a 33% increase worldwide, and from 123 to 166 in the US, a 35% increase.

Cloud-provider network outages globally jumped from 5 to 22, a 340% increase. The US accounted for two of them, up from one the week before.

Collaboration-app network outages dropped from four to two globally and from two to zero in the US.

There were three notable outages this week.

On Feb. 23, LinkedIn experienced a service disruption affecting its mobile and desktop global user base. The outage was first observed around 1:50 p.m. EST, with users attempting to connect to LinkedIn receiving server-unavailable error messages. Around 45 minutes later, services to some regions began to return, although others were still unable to use the services. After another 45 minutes, the server unavailable messages were replaced with content not available errors. The total disruption lasted around two hours, during which no network issues were observed connecting to LinkedIn web servers, further indicating the issue was application related. Service was restored around 3:40 p.m. EST. Click here for an interactive view of the outage.

On Feb. 25, Hurricane Electric experienced an outage that affected users across inthe US, UK, Australia, South Africa, New Zealand, Germany, Canada, Japan, Spain and Brazil. The outage, lasting around 36 minutes over a 45-minute period, was divided into two events. The first was observed around 1:40 a.m. EST on Hurricane Electric infrastructure in Singapore and Hong Kong. It lasted 24 minutes and initially cleared around 2:05 a.m. EST, but five minutes later, around 2:10 a.m. EST, a node in Marseille, France, was affected and created issues for around 12 minutes. The outage affected access to customer networks including Credit Suisse, Proctor and Gamble, DBS, Shell, and Bank of America. The issue was cleared around 2:25 a.m. EST. Click here for an interactive view of the outage.

On Feb. 24, Comcast Communications experienced an outage that affected peers and customers in the US, Canada, and the Netherlands. The outage, lasting around 14 minutes, was first observed around 11 p.m. EST and appeared to be centered on Comcast nodes in Newark, NJ, and affected access to customers including CBS, NBC, Bloomberg, and JP Morgan Chase. Ten minutes into the outage, the radius of the disruption expanded to include Comcast nodes in New York, NY, Dallas, TX, Chicago, IL, and Boston, MA. It affected customers in more countries including the US, UK, Australia, Canada, France, and the Netherlands. The outage was cleared around 11:15 p.m. EST. Click here for an interactive view of the outage.

Update Feb. 22

Outages overall were up 35%, from 206 to 279, compared to the week before. In the US they were up 53%, from 90 to 138.

Globally, the number of ISP outages jumped from 154 to 233, a 51% increase, and in the US, they increased from 78 to 123, up 58%.

Cloud-provider network outages dropped from 24 to five, a 79% decrease worldwide. In the US, they dropped from five to one.

Collaboration-app network outages doubled from two to four globally and from one to two in the US.

On Feb. 16, Level 3 Communications experienced a notable outage that affected multiple downstream partners and customers in countries including the US, Canada, Argentina, Mexico, and the UK. First observed around 11:40 a.m. EST, the outage lasted around 36 minutes over a one-hour period and affected access to customers including Bank of America, TiVo, and Lending Tree. The first minutes of the outage appeared to center on Level 3 nodes in San Francisco, CA, affecting only the U.S. and Canada. Ten minutes into the outage, nodes in Boston, MA, became involved, and at this point the impact spread to include the other countries. Five minutes after that, the outage in the San Francisco node cleared leaving just the Boston infrastructure in an outage condition. Twenty-four minutes after the outage was first observed it appeared to clear. Fifteen minutes later the outage reappeared, this time centered on nodes in San Francisco, Salt Lake City, UT, and Portland, OR. This second episode lasted for four minutes and was followed by two more four-minute outages each five minutes apart. The outage was cleared around 12:45 p.m. EST. Click here for an interactive view of the outage.

On Feb.18, GTT Communications experienced an outage that affected some of its partners and customers in the US. It lasted around 14 minutes, was first observed around 4:30 a.m. EST, and appeared to center on GTT nodes in Los Angeles, CA, affecting customer networks including Ford Motor Company, Guaranteed Rate and Loanet. The outage was cleared around 4:45 a.m. EST. Click here for an interactive view of the outage.

Updated Feb. 15

Worldwide outages across all three categories decreased from 267 to 206, a 23% drop from the week before. They dipped 4% in the US, from 94 to 90.

ISP outages decreased 20%, from 192 to 154, worldwide, and they stayed the same in the US at 78.

Globally cloud-provider network outages increased from 21 to 24, up 14%, and in the US bumped up from three to five.

Global collaboration app network outages remained at two for the second week in a row, while US outages dropped from two to one.

Around 4:30 a.m. EST on Feb. 11, AT&T suffered an outage centered in Washington, D.C., followed by issues in Tulsa, OK, and San Antonio, TX. that affected customers including some in the US, Germany, and Australia. Five minutes later only Washington, DC, and Tulsa, OK, nodes were involved and five minutes after that, just those in Washington, DC. Customer networks affected included J.P. Morgan Chase, Jeffries Group, Travelers Property Casualty, and ConocoPhillips. The outage lasted 14 minutes and was cleared at around 4:45 a.m. EST. Click <a href="https://example.com/here-pipeline-networks-

On Feb. 11, Cogent Communications experienced a series of outages over a period of 3 hours and 38 minutes that affected downstream providers as well as Cogent customers globally. The outage lasted a total of 43 minutes and was first observed around 1:07 a.m. EST centered on Cogent nodes in San Francisco, CA. This initial outage lasted around two minutes, and the Cogent environment was then stable for 43 minutes before experiencing a series of four-minute outages observed on Cogent nodes in Dallas, TX and Phoenix, AZ. An hour and a half after the initial outage was observed, a four-minute outage was observed centering on Cogent nodes located in Newark, NJ. The outage reappeared 25 minutes later, extending the list of affected nodes to locations including San Francisco, CA, Atlanta, GA, Cleveland ,OH, New York, NY, and Washington D.C. Less than an hour later, a 19-minute outage affected nodes including Miami, FL, Austin, TX, El Paso, TX, Houston, TX, San Jose, CA, Los Angeles, CA, and Las Vegas, NV. Customer networks affected included Ford Motor Company, Oracle, Home Depot, and TikTok. The outage was cleared at around 4:45 a.m. EST. Click here for an interactive view of the outage.

Updated Feb. 8

Globally outages in all three categories decreased from 278 to 267, a 4% decrease. In the US, outages decreased from 119 to 94, a 21% decrease.

ISP outages worldwide decreased from 214 to 192, a 10% drop. In the US, ISP outages decreased from 102 to 78, down 24%.

Cloud-provider network outages worldwide dropped from 30 to 21, down 30%. In the US they dropped from 10 to three.

Collaboration-app network outages globally decreased from five to two and stayed the same, at two, in the US.

There were two notable outages this week. Around 1:40 a.m. on Feb. 1, Hurricane Electric experienced an outage affecting countries including the US, New Zealand, and Brazil. The outage was centered on Hurricane Electric infrastructure in Los Angeles, CA. After five minutes, the number of interfaces affected there reduced and appeared to affect users in the US only. The outage lasted around nine minutes and affected customers including Disney Streaming and LinkedIn. The issue was cleared around 1:50 a.m. ET. Click <a href="https://example.com/here-for-an-interactive-view-of-the-outage-for-an-inte

On Feb. 2, TATA Communications (America), experienced an outage that affected some of its downstream partners and customers in countries including the US. It was first observed around 1:30 a.m. ET as TATA nodes located in Los Angeles, CA, appeared to show outage conditions. After five minutes, other nodes located in Seville, Spain, and Singapore, were affected. As the number of affected nodes increased, so did the number of customer networks affected, including Wells Fargo, Reuters, Twitter, and Salesforce. The outage lasted around 18 minutes across a half hour period and was cleared around 2 a.m. ET. Click here for an interactive view of the outage.

Update Feb. 1

Outages in all three categories globally ticked up three from 275 to 278 during the week and dropped from 132 to 119 in the US, an 11% decrease.

Globally, the number of ISP outages decreased from 217 to 214. In the US, levels slightly decreased too, from 106 to 102.

Cloud-provider network outages jumped from 18 to 30 worldwide, a 67% increase. US outages increased from nine to 10.

Collaboration-app network outages remained flat both globally and in the US, with five worldwide and two in the US.

Two notable outages affecting Comcast Cable and Verizon occurred during the week.

On Jan. 26, Comcasts suffered a 24-minute outage first observed around 12 a.m. ET that appeared to be centered at Comcast nodes in Newark, NJ, affecting access to customer networks including Amazon, Bloomberg and CBS. At 20 minutes into the outage, disruption was also observed in a New York, NY, node. The outage affected multiple Comcast peers and customers, and it was cleared around 12:25 a.m. ET. Click here for an interactive view of the outage.

On Jan 12 Verizon experienced an outage that affected East Coast customers abilty to access services including Slack, Zoom, Amazon and Google Traffic disruption was observed around 11:30 a.m. ET across multiple nodes concentrated along the US Verizon backbone. During the outage Verizon indicated a fiber cut affected service delivery in the Brooklyn, NY, area but is not believed directly related to the larger outage. Network services started to stabilize around 12:30 p.m. ET. Click here for an interactive view of the outage.

Update Jan. 26

Outages in all three categories worldwide rose from 215 to 275, a 28% increase compared to the week before. In the US they rose from 105 to 132, a 50% increase.

Globally, the number of ISP outages increased from 160 to 217, a 36% increase and in the U.S., they increased from 88 to 106, a 20% increase.

Cloud provider network outages increased from 14 to 18 globally, a 29% increase, while in the US they jumped from two to nine, a 350% increase.

Collaboration app network outages worlwide increased from two to five and from one to two in the US.

There were two notable outages during the week. On Jan. 20, Level 3 Communications experienced an outage affecting downstream partners and customers in countries including the US, South Africa, the U.K., Turkey, Russia, New Zealand, and Australia. The outage was first observed around 12:20 p.m. ET and lasted about 34 minutes. It appeared centered on Level 3 nodes in Washington, DC, and affected customers including J.P. Morgan Chase, Visa International, and Oracle. IT was cleared around 12:55 p.m. ET. Click here for an interactive view of the outage.

On Jan.18, TATA Communications (America), experienced an outage affecting many of its downstream partners and customers in multiple countries including the US, the UK, Australia, India, Singapore, Germany, Hong Kong, Japan and Canada. The outage was first observed around 7:40 a.m. ET. TATA nodes located in Newark, NJ; New York, NY; Frankfurt, Germany; London, England; Singapore; Paris, France; and Buckinghamshire, England all appeared to show outage conditions. After five minutes, TATA nodes located in Chicago, IL; San Jose, CA; Seville, Spain; Tokyo, Japan; and Hong Kong were affected. As the number of TATA nodes affected increased, so did the number of customer networks affected, including Wells Fargo, Reuters, Oracle, and Amazon. The outage lasted around 34 minutes and was cleared around 8:15 a.m.ET. Click here for an interactive view of the outage.

Update Jan. 19

Worldwide outages in all three categories increased from 157 to 215 over the previous week, an increase of 37%, and were up from 88 to 105 in the US, a 19% increase.

The total number of ISP outages increased from 122 to 160, up 31%, while in the US the increase was 19%, from 88 to 105.

Cloud-provider network outages doubled from 7 to 14 worldwide and remained the same in the US at two.

Globally there were two collaboration-app network outages, up from one, and they remained at one in the US.

There were two notable outages. On January 13, AT&T experienced an outage that affected customers in multiple countries, including the US, UK, Japan, Germany, Canada, Australia, India, and the Netherlands.

The outage started around 9:25 p.m. ET and centered on AT&T nodes located in Phoenix, AZ, and last 23 minutes, and was cleared around 9:50 p.m. ET. Click here for an interactive view of the outage.

On January 13, Microsoft experienced an outage that affected some downstream partners and access to services running in Microsoft environments. The 12-minute outage was first observed around 12:15 a.m. ET and occurred in three four-minute occurrences over a 30-minute period. IT centered in Microsoft nodes in Des Moines, IA. It was cleared around 12:45 a.m. ET. Given the timing and uniform pattern of the outage, it is likely to have been an automated maintenance process. Click here for an interactive view of the outage.

Update Jan 12

Global outages in all three categories increased from 96 to 157, up 39% from the week before, and in the US they jumped from 33 to 88, up 167%.

ISP outages worldwide went from 71 to 122, up 72%, and from 30 to 74 in the US, up 147%.

Cloud provider outages increased from two to seven, a 250% increase,

Globally, cloud provider network outages increased from 2 to 7, a 250% increase, and from zero to two in the US.

There was just one collaboration-app network outage and that occurred in the US. There were none the week before.

There were two notable outages during the week. On Jan. 4, Slack experienced an outage at 10 a.m. EST that lasted until after 1:40 p.m. It affected customers worldwide, with many users unable to login, send or receive messages, or to place or answer calls. Slack identified the cause as insufficient router capacity in its cloud-provider network to meet customer demand. Starting at 11:15 a.m. EST Slack implemented a fix, and many customers could use the service again by 12:15 p.m. Slack announced messaging service restoration at 1:40 p.m. EST, although it's calendar integration features took longer to restore.

On Jan. 7, Cogent Communications experienced an outage at 4:40 p.m. that lasted just under an hour and that affected downstream providers and Cogent customers globally. It consisted of four outage occurrences over a two-hour period, the first of which centered on Cogent nodes in Amsterdam, the Netherlands, mainly affecting European countries. Five later, Cogent nodes in Washington, DC, also exhibited outage conditions. At this point the Amsterdam nodes recovered, but the Washington D.C. nodes stayed down for another 35 minutes. Thirty-five minutes after the first outage cleared, the second outage was observed, centering on nodes in Oakland, CA. It lasted four minutes and affected only customers in the US. This was repeated five minutes later, this time lasting around three minutes. Following a five minute break, a final four-minute outage was observed, this time centering on Cogent nodes in Las Vegas, NV, and Oakland, CA. The outage affected access to services including Amazon, Yandex (Russan based search engine), Oracle, and Sberbank (a state-owned Russian banking and financial services company). The outage was cleared around 6:35 p.m. EST. Click here for an Interactive view of the outage.

Update Jan. 5

Outages in all three categories decreased from 172 to 96, a 44% decrease compared to the week prior. In the US, they decreased from 80 to 33, a 59% decrease.

Globally, ISP outages decreased from 135 to 71, down 47%. In the US, they dropped from 74 to 30, a 59% decrease.

Cloud-provider network outages decreased from five to two, and in the U.S., from two to zero.

There were no collaboration app network outages the previous two weeks.

Update Dec. 21

Total outages across all three categories dropped vs. the previous week, from 252 to 193, a 23% difference. In the US they outages decreased from 115 to 89, also a 23% difference.

Globally, the number of ISP outages decreased from 180 to 145, a 19% decrease, and in the US they decreased from 97 to 75, a 23% drop.

Cloud-provider network outages worldwide decreased from 11 to four, down 64%, while in the US they fell from 2 to 1.

There were three collaboration-app network outages during the week, all in the US. The week before there were four outages, none of them in the US.

There were two notable outages. On Dec. 14 between 6:50 a.m. and 7:30 a.m. EST Google experienced a global outage. ThousandEyes tests measured elevated server wait times, indicating the application was taking longer to respond to service requests. During the service disruption, network paths connecting to Google's edge servers did not show any traffic loss

The other notable outage hit NTT America and affected some downstream providers and NTT networks in multiple countries including the US, Germany, Brazil, the UK, and Canada. The outage was first observed around 8:30 a.m. EST and appeared to be centered on NTT infrastructure in Los Angeles, California, and Seattle, Washington. The outage lasted just over 19 minutes and was cleared around 8:50 a.m. EST. Click here for an interactive view of the outage.

Update Dec. 14

Total outages in all three categories were up 26%, from 200 to 252, over the previous week, and the were up 39% in the US, from 83 to 115.

ISP outages worldwide increased from 129 to 180, a 40% increase. In the US, ISP outages increased from 66 to 97, a 47% increase.

Worldwide cloud-provider network outages increased from eight to 11, up 38%. In the US they increased from one to two.

Globally, there were four collaboration-app network outages, up from zero. None of them were in the US.

There were two notable outages during the week. On Dec. 10, Hurricane Electric experienced a 17-minute outage that hit users in the US, Canada, Germany, Egypt, Sweden, France, and the UK. The outage was first observed around 2:11 p.m. EST centered on Hurricane Electric infrastructure in Atlanta, Georgia, and 10 minutes later just in Dallas, Texas. The last two minutes affected Hurricane Electric interfaces in both Atlanta and New York, New York. The issue was cleared around 2:38 p.m. EST. Click here for an Interactive view of the outage.

On December 8, Cogent Communications experienced an outage that, though only lasting four minutes, affected multiple downstream providers, as well as Cogent customers globally. The outage was first observed around 4:50 p.m. PST across Cogent's global infrastructure, with Cogent nodes in the US, Germany, UK, Spain, France, Switzerland, and Ireland all reflecting the outage. The outage affected access to services including Microsoft, Amazon, SAP, Disney Streaming, and Wells Fargo. The outage was cleared around 4:55 p.m. PST. Click here for an Interactive view of the outage.

Update Dec. 7

Worldwide outages in all three categories were up compared to the week before from 159 to 200. In the US they were up from 48 to 83, 73% increase.

Globally ISP outages increased from 119 to 129, up 8%. They were up 65% in the US from 40 to 66.

Overall cloud-provider network outages increased from five to eight, but in the US they dropped from four to one.

For the first time since late September, there were zero collaboration app network outages anywhere in the world.

A notable outage occurred Dec. 2 when Level 3 Communications experienced a 14-minute outage that affected several downstream providers as well as Level 3 customers in the UK and Canada. First observed around 1:10 a.m. PST centered on Level 3 nodes in Seattle, WA. Service was restored to many of the customers and providers after five minutes and the outage was cleared at 1:25 a.m. PST.

Update Nov. 30

During the last week outages worldwide across all three categories decreased from 306 to 159, a 48% drop. In the US, they decreased 75%, from 193 to 48.

Globally, the number of ISP outages decreased by 54%, from 256 to 119. In the US they dropped 77%, from 176 to 40.

Cloud-provider network outages decreased overall from eight to five, a 38% decrease. In the US, they went up one, from three to four.

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Collaboration-app network outages decreased from 4 to 1 worldwide, and in the US, the number dropped from 3 to 1.

A notable outage occurred on Nov. 25 when Kinesis, a key AWS service, suffered a day-long outage that affected other AWS services and many of its customers who rely on these services to run their businesses (including iRobot's Roomba vacuum cleaner app). The outage was not network related, and ThousandEyes tests did not detect an elevation in packet loss during the incident. AWS later described the root cause as related to an operating system configuration in a detailed incident post-mortem.

Update Nov 23

Total outages in all three categories were up 20% globally over the week before from 256 to 306. In the US, the total rose 28%, from 121 to 193.

ISP outages globally were up 28%, from 200 to 256, and up 71%, from 103 to 176 in the US.

Globally, cloud-provider network outages decreased from 12 to 8, a 33% decrease. In the US the number remained at three for the fourth week in a row.

Collaboration app network outages worldwide increased from three to four. The US number was three, just like the week before.

There were two notable outages during the week. On Nov. 17, Cogen Communications experienced an outage that lasted over two hours, affecting several downstream providers, as well as Cogent customers globally. The outage was made of two incidents over a three-hour period. The first was observed just after 3 a.m. EST and lasted around 48 minutes. It was observed in Cogent nodes in San Francisco, California, and Oakland, California, as well as Seattle, Washington. It affected access to organizations including Microsoft and ON24. Five minutes into the outage it expanded to nodes in locations including Salt Lake City, Utah; Denver, Colorado; Chicago, Illinois; Portland, Oregon, Los Angeles, California, and Cleveland, Ohio. This in turn affected a number of networks in the US and other countries. The number of Cogent nodes displaying symptoms decreased until around the 48-minute mark when the only nodes displaying outages were restricted to those in San Jose, California.

The second outage was observed at around 4:15 a.m. EST, 20 minutes after the first one cleare. Though it lasted 90 minutes, the second outage centered in San Francisco and Oakland nodes in California. Networks affected included the California-based unified communications provider 8x8, as well as TikTok (Bytedance), and Microsoft. Click <a href="https://example.com/here-to-second-networks

Another notable outage occurred Nov. 18 about 3:25 a.m. affecting PCCW Global and some of its US East customers and partners using its network to access services including Twitter, TiVo, Ellie Mae and Verizon's AirTouch. The outage lasted around 40 minutes and occurred over two incidents across an 80-minute period. Both incidents appeared to be focused on PCCW Ashburn, Virginia, nodes. The first incident began at around 3:25 a.m. EST and lasted 13 minutes. The second incident was observed 35 minutes later and lasted around 24 minutes. The outage was cleared at around 4:45 a.m. EST. Click here for an Interactive view of the outage.

Update Nov. 16

Global outages in all three categories increased 2%, from 251 to 256, and in the US they jumped 26% from 96 to 121.

ISP outages globally were up 1% from 198 to 200, while in the US they increased 23% from 84 to 103.

Outages in public cloud provider networks worldwide decreased 20% from 15 to 12 and stayed the same in the US at three.

Collaboration app network outages decreased from four to three globally, all of them in the US.

There were two noteworthy outages during the week. Microsoft suffered an outage at 1:20 p.m. EST Nov. 10 that lasted five minutes. It affected users in countries including the US, Mexico, Ireland, Russia, and China, and it was centered in Microsoft infrastructure in Des Moines, Iowa, and Cleveland, Ohio. Click here for an Interactive view of the outage.

A Verizon outage centered at facilities in Kansas City, Kansas, and Newark, New Jersey, started at 2:25 a.m. EST, causing slow page loads for users. The New Jersey outage lasted five minutes and affected users on the U.S. East Coast, and the Kansas City outage lasted 10 minutes. Click here for an Interactive view of the outage.

Update Nov. 2

Globally, outages observed across all three categories decreased from 227 to 214, a 6% decrease compared to the week prior. In the US, total outages decreased from 121 to 85, a 30% decrease compared to

ISP outages worldwide decreased from 184 to 151, an 18% decrease. In the US, the number of dropped from 107 to 67, a 37% decrease.

Cloud-provider network outages increased from 9 to 29, a 222% increase jump. In the US, outages increased from one to three.

Collaboration-app network outages globally dropped from five to one, a 400% decrease compared to the week prior, and in the US they dropped from three to zero.

A notable outage was suffered by Cogent Communications on Oct. 24, affecting downstream providers and Cogent customers worldwide. The outage took place in two incidents over a 60-minute period, the first lasting 24 minutes and affecting Cogent nodes across the US including those in Washington, DC, New York, NY, Atlanta, GA, Dallas, TX, Los Angeles, CA, and San Francisco, CA. The second started about 15 minutes after the first ended and lasted about eight minutes, hitting the same locations. Click here for an interactive view of the outage.

Update Oct. 26

Globally, the number of total outages in all three categories decreased 4%, while US outages overall increased 9% compared to the week prior.

The number of ISP outages worldwide decreased by one, dropping from 185 to 184. In the U.S., the number increased from 93 to 107, a 15% jump. ISP outages accounted for 81% of all outages observed this week.

Globally, cloud-provider outages increased from seven to nine, and there was one outage in the US, where there were none the week before.

Collaboration-app networks suffered five outages worldwide, up two, and three in the US, one more than the week before.

Cogent Communications suffered a two-stage outage on Oct. 20 at 2:10 a.m. EDT. It affected Cogent customers globally as well as downstream providers connected to the Cogent network.

The first outage lasted about eight minutes, involved Cogent nodes in Chicago, Illinois; Denver, Colorado; Cleveland, Ohio; Salt Lake City, Utah; Dallas, Texas; and San Francisco, California. The second, 10-minute outage began around 15 minutes after the first ended and centered on Cogent infrastructure in San Jose, California. It affected fewer countries and no downstream providers. Click here for an interactive view of the outage.

Update Oct. 21

Globally, outages in all three categories fell 10%, from 261 the previous week to 236. In the US, outages fell 13%, from 128 to 111.

ISP outages worldwide declined 7%, from 199 to 185. The US saw a 15% drop, from 110 to 93.

Public cloud provider outages plunged 70% from 23 to 7 globally, while in the US they bottomed out, with zero reported outages.

Collaboration app network outages increased from two to three worldwide, with two of them occurring in the US, the same number as the week before.

A notable outage occurred about 3:30 a.m. EDT on Oct. 13, affecting the Zayo telecom network for more than 90 minutes and having an impact on other downstream provides. It started in Denver and spread to Zayo infrastructure in San Francisco, San Jose, Salt Lake City and parts of Australia and Europe. Click <a href="https://doi.org/10.1007/joseph.2007/j

Update Oct. 12

Globally, the number of outages observed in all three categories increased by 12% vs. the week before, from 233 to 261. In the US they increased 15%, from 111 to 128.

ISP outages worldwide increased 18%, from 168 to 199. In the US they rose 15%, from 96 to 110.

The number of outages in public cloud networks globally dropped from 28 to 23, a decrease of 18%. In the US they stayed steady at four.

In total there were two collaboration app outages, both in the US.

A notable outage for the week started Oct. 5 about 6 a.m. PDT and affected the collaboration app Slack. ThousandEyes tests returned 503 server errors, indicating the service was unavailable, as well as timeouts, suggesting that the application was running slower than normal. These problems were intermittent. No network issues were observed connecting to Slack's edge servers, which are hosted within AWS. Slack confirmed issues within their backend systems and that they were resolved at 10 p.m. PDT. Click here for an interactive view of the outage.

Update Oct. 5

Globally, the total number of outages observed across all three categories increased by 21% from the week before, from 193 to 233. The increase was reflected in the US, where outages rose from 84 to 111, a 32% increase.

The number of ISP outages worldwide increased by 15%, rising from 146 to 168, accounting for 72% of all outages observed. In the US, the number rose from 72 to 96, a 33% increase.

Globally, cloud provider outages more than doubled from 11 to 28, a 155% increase. In the US, the number rose from one to four.

For the first time in three weeks there were no collaboration-app-network outages observed globally. The week before there were two.

A notable outage occurred about 3 a.m. EDT on Sept. 30 when Cogent, a US based multinational transit service provider, experienced a service disruption that affected users around the world attempting to access Microsoft, Amazon, Facebook, and Google services. The outage lasted 41 minutes spread over three hours and affected multiple parts of Cogent's US network. The timing and pattern of the outage indicate traffic-engineering activity as the cause. The service was restored about 5:50 a.m. EDT. Click here for an interactive view of the outage.

Update Sept. 28

The number of outages observed worldwide in all three categories decreased by 16% from the week prior, from 230 to 193. In the U.S., the number of outages increased by 11, a 15% increase.

Global ISP outages dropped from 175 to 146, down 17%. But in the U.S., outages rose from 63 to 72, an increase of 14%.

Public cloud outages worldwide increased from eight to 11, up 38%. U.S. public cloud outages remained stable at one.

Collaboration app network outages jumped 300% globally from one to four. Most of that was due to the 300% increase in the U.S. from one to three.

Google suffered a notable disruption about 9 p.m. EDT Sept. 24 that prevented many users around the world from accessing services including Gmail, YouTube, Google Calendarand Google Meet. Front-end servers remained reachable during the outage, but requests to access services returned receive errors. Google confirmed that a pool of servers that handled application traffic on the backend had crashed. Service was restored about 9:30 p.m. EDT. Click here for an interactive view of the outage

Update Sept. 21

The number of outages reported globally in all three categories was 230 for the week Sept. 14-20, up 50% from 153 the week before. In the U.S., the count was 73 for the latest week, up two from the week before.

ISP outages rose 62%, from 108 to 175 worldwide, and from 57 to 63 in the U.S., and increse of 11%.

Public-cloud provider outages were down a third, from 12 to eight, with the count in the U.S. dropping from five to just one.

Collaboration-app network providers suffered a single outage this week, with that one occurring in the U.S. The week before, there were none.

Instagram and Amazon suffered notable outages during the week.

About 11:10 a.m. PDT on Sept. 17 Instagram experienced a service disruption that prevented many users worldwide from using the application. With no network or reachability issues with its front-end servers, and users receiving HTTP 502 error notifications, the cause appeared to be anapplication back-end issue. Service began to return about 11:15 a.m. PDT, wth full service restored by 11:45 a.m. PDT. Click here for an interactive view of the outage.

About 2:45 p.m. EDT Sept. 14 Amazon suffered a 29-minute outage centered on nodes in Columbus, Ohio, and affecting Amazon cloud-compute instances at its Hilliard, Ohio, data center. The outage affected 99 interfaces and was contained to the one location. The impact was that some users experiencing non-responsive or slow EC2 instances. The outage was cleared just past 3 p.m. EDT.

Update Sept. 14

Globally the number of outages observed between Sept. 7 and 13 in all three categories decreased by 40% from the week before, from 256 to 153, the lowest figure observed since early February. In the U.S., the number of outages dropped from 134 to 71, a 47% decrease.

The number of ISP outages worldwide dropped 50% from 216 to 108. In the decrease was 54% from 123 to 57, the lowest weekly number since early April.

Cloud-provider outages globaly decreased by 25% from 16 to 12. In the U.S. they remained at 5 for the second consecutive week.

Globally and in the U.S. for the first week since early August, no collaboration app network outages were recorded.

Cogent Communications suffered three outages about 11:45 a.m. EDT on Sept. 11, lasting 36 minutes. They three lasted 13 minutes, 4 minutes and 19 minutes, spread across just over an hour. All three centered on Cogent node in Newark, N.J., and affected customers across the U.S. and also in the U.K., Netherlands, Canada, Mexico and India. The customers were using the network to access services such as Visa online services, Microsoft office, and Shopify. The outages occurring during business hours and their focus indicate that some form of control-plane condition was the cause. The problem was cleared about 12:50 p.m. EDT.

Update Sept. 7

Globally the number of outages observed in all three categories decreased by 33% from the week prior, from 381 to 256. In the U.S., the number of outages dropped by 46, decreasing from 180 to 134, a 26% decrease from the week prior.

Worldwide, the number of ISP outages decreased by 103, dropping from 319 to 216, a 32% decrease and accounting for 84% of all outages observed this week. In the U.S., the number of ISP outages decreased by 27, dropping from 150 to 123, an 18% decrease.

Cloud provider outages globally increased by a third from 12 to 16. In the U.S., outages more than doubled, rising from two to five.

There was just one collaboration app provider outage worldwide -- not in the U.S. -- down from two.

PCCW Global suffered two outages starting about 12:40 a.m. EDT Sept. 3, one lasting 20 minutes, and the other lasted six. The first centered on PCCW nodes located in Atlanta, Ga., and affecting services using the Charlotte Colocation and Affiliated Computer Services networks. The second started about half an hour after the first cleared and centered on PCCW nodes in Ashburn, Va., and affected access to Oracle Cloud services. All outages were cleared by 1:45 a.m. EDT. The cause was likely the result of a traffic-engineering exercise.

About 6 p.m. PDT, Comcast suffered a four-minute outage that affected users in the western U.S. centered on Comcast core devices in Sunnyvale, Calif. and mainly affecting services across Comcast Xfinity networks (Comcast Cable Communications). The outage would likely have caused internet connectivity slowdowns and disruption for users.

Update Aug. 31

Globally the number of outages observed across all three categories increased by 29% from the week prior, rising from 296 to 381. This was the largest number of outages recorded in a single week this year. In the U.S. outages increased 70% compared to the week prior from 106 to 180.

The vast majority of outages were due to ISP problems. Worldwide the number jumped from 214 to 319, with the count in the U.S. growing from 80 to 150.

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Public cloud outages declined worldwide fom 27 to 12 and from four to two in the U.S.

Collaboration apps networks stayed stead at two worldwide, with both of them occurring in the U.S. where the count rose from zero to two.

CenturyLink suffered a major outage just after 6 a.m. EDT Aug. 30 that hit a broadrange of providers and businesses including Twitter, Microsoft (Xbox Live), Discord, Reddit, Cloudflare, OpenDNS, and Hulu. Shortly after the outage began, providers started rerouting traffic from CenturyLink to alternate providers in an effort to alleviate the impact, however, given the size and distribution of CenturyLink's network, many services were still unreachable, ThousandEyes said. At 8:13 a.m. EDT, CenturyLink announced it was investigating issues affecting some services within their Mississauga, Ontario, Canada data center. Having identified the cause as an incorrect flowspec announcement from the Mississauga data center, CenturyLink requested that its Tier 1 Internet provider partners de-peer and ignore any traffic coming from its network. (BGP flow specification (flowspec) is a feature that allows you to rapidly deploy and propagate filter policies among a large number of BGP peer routers.) In order to resolve the issue, CenturyLink reset all the equipment and start with clean BGP routing tables, a process that took almost five hours to complete. Just before 3:00 p.m. EDT, CenturyLink announced that the issue had been resolved and all services had been restored.

Update Aug. 24

Globally the total number of outages observed across all three categories during the week Aug. 17-23 increased by 21% compared to the week prior, rising from 245 to 296. This increase in the U.S. rose from 90 to 106 an increase of 18% from the week prior.

ISP outages worldwide rose from 166 to 214 and from 72 to 80 in the U.S.

Public cloud network outages dropped worldwide from 28 to 27, and stayed the same in the U.S. at four.

Collaboration app network outages rose from zero to two globally, but remained at zero in the U.S.

ThousandEyes flagged three notable outages during the week.

Just after 8 a.m. EDT on Aug. 18, Spotify suffered an outage that prevented users from streaming songs from the service. The outage lasted just over an hour and would play songs for a few seconds, then pause and return an error. The outage is believed to be assosicated with an expired TLS certificate. Click here for an explanation on the impact of certificate expiration.

About 11:30 p.m. EDT on Aug. 17, Equinix suffered a power outage to a colocation center in Docklands, London. About 2 a.m. the failure of an output static switch from a UPS system triggered a fire alarm, resulting in loss of power for multiple customers. At 3:50 a.m. services started to be restored and were fully restored by 4:50 p.m. EDT. Affected customers included BT, Sky, Virgin Media, Giganet, Epsilon, SiPalto, EX Networks, Fast2Host, ICUK.net, and Evoke Telecom.

About 10:50 p.m. PDT on Aug. 19 Cogent Networks suffered a 36-minute outage affecting U.S. users' access to Microsoft networks and associated services, as well as CDN content for services such as TikTok and ESPN. The outage affected nodes across the U.S. and apparently resulted from a configuration adjustment. A second outage two hours later at 11:26 p.m. PDT lasted 24 minutes and likely was connected to the first outage's configuration adjustment. It affected users in the U.S., Asia-Pacific and Europe, Mid-East and Africa. Click here for an interactive view of the outages.

Update Aug. 17

Global outages across all three categories fell between the weeks of Aug. 3-9 and Aug. 10-16 from 294 to 245 (-17%) and in the U.S. from 123 to 90 (-27%).

ISP outages dropped worldwide from 227 to 166 and from 109 to 72 in the U.S.

Public cloud outages worldwide fell from 30 to 28 and from five to four in the U.S.

Collaboration app network outages worldwide remained at 0 for the second week in a row.

Cogent Networks suffered a notable outage at about 10:30 p.m. EDT on Aug. 13 that lasted about 40 minutes and affected its Atlanta, Ga., network. It affected access to Microsoft networks and associated services, such as Sharepoint, Office, Azure services and hosting, and appeared to be located in the Cogent data center in Atlanta. Based on the affected interfaces and nodes it appears it was a result of configuration adjustments rather than a control-plane issue.

Separately, BT incurrd an outage on its European backbone about 7:30 p.m. EDT affecting customers and partners in the U.K., U.S., Sweden, and Germany. The outage came in three four-minute intervals spanning 25 minutes, indicatingan automated restoration process and likely was for maintenance. The outage cleared at 7:55 p.m. EDT.

Update Aug. 10

Globally, there were no collaboration app network provider outages observed this week. In the U.S., this is the second consecutive week of zero outages.

Overall the number of outages in all three categories increased from 248 to 294, the highest tally since late April. In the US the total was up from 99 to 123.

ISP outages globally increase from 181 to 227. In the U.S. the increase was from 88 to 109.

Cloud-provider outages worldwide rose from 18 to 30, and in the U.S. increased from three to five.

Collaboration app network outages dropped from 1 to 0. U.S. outages remained at 0.

About 8:25 p.m. PDT on Aug. 4 Cogent Networks experienced a 15-minuite network disruption affecting parts of its San Francisco network and its infrastructure in the U.K., Germany and the Netherlands. It affected nearly 70 network interfaces. The scope and timing of the disruption indicates the provider was making service adjustments/maintenance. An interactive visualization of the outage is here.

About 3:25 a.m. CDT on Aug. 5, GTT had a 10-minute network disruption affecting parts of their infrastructure in Dallas, Chicago, Los Angeles, and London. The timing and scope of the disruption are consistent with service-adjustment activity. Interactive visualization of the outage is here.

Update Aug. 3

During the week of July 27-August 2, the number of outages globally in all three categories decreased by 6% from the week prior, from 263 to 248. In the U.S., outages rose from 90 to 99, a 10% increase from the week prior.

The number of ISP outages globally decreased by 1%, dropping from 183 to 181. In the U.S., ISP outages rose from 73 to 88, a 21% increase compared to the week prior.

Worldwide cloud provider outages decreased by 38% when compared to the week prior. In the U.S., there were three public cloud network outages for the third consecutive week.

Globally, collaboration app network provider outages decreased from 3 to 1, a drop of 66% when compared to the week prior. In the U.S., no collaboration app network outages were recorded this week.

There were two noteworthy outages during the period:

Verizon Business suffered an outage within their network that impacted users accessing services such as Zoom, Bloomberg Professional and Flagstar Bank. The outage centered on former UUNET nodes located in San Jose Calif., and Seattle. The outage occurred just before 11:00AM PDT on July 27 and lasted a total of 27 minutes, over a 55-minute period. The outage cleared around 11:55AM PDT.

Reddit users began to experience some errors when accessing Reddit's site around 10:30AM EDT on July 29. During the incident, the Reddit site was reachable, but many of the page components produced errors either failing to load or simply not responding to requests, all of which is indicative of an application issue as opposed to a network disruption. A fix was implemented by Reddit at 1:32PM EDT, and Reddit announced that the issue had been resolved at 3:24PM EDT.

Update July 27

During the week July 20-26, the number of outages globally in all three categories increased by 14% from the week prior, from 231 to 263. In the U.S., outages rose from 70 to 90, a 29% increase from the week prior.

The number of ISP outages globally increased by 5%, from 175 to 183. In the U.S., ISP outages rose from 60 to 73, a 22% increase and a return to late June levels.

Cloud-provider outages worldwide were almost double, increasing 93%, from 15 to 29. In the U.S., there were three public cloud network outages for the second consecutive week.

Globally, collaboration-app network provider outages increased from 1 to 3, a rise of 200%, with all outages attributed to a single provider in the U.S. These were the first collaboration outages seen domestically since mid-June.

The most noteworthy outage of the week occurred just after 3:15 a.m. EDT on July 23 when services on Garmin.com and Garmin Connect became interrupted. The outage – which at the time of this writing is ongoing – also affects Garmin call centers, which were unable to receive calls and emails or participate in online chats. The network connectivity to Garmin services remains active, but syncing data and accessing functions on Garmin Connect remain down. Since Thursday, users attempting to access these functions have been met with a "Server Maintenance" message. In a press release on the 27th, Garmin confirmed it suffered a cyber attack that encrypted some of their systems, resulting in many of their online services being interrupted.

Update July 20

During the week of July 13-19 global outages of all three kinds dropped 19% from the week before, from 285 to 231. The drop in U.S. outages was even greater – 28% - from 97 to 70.

ISP outages dropped globally from 215 to 175 or 19%. In the U.S. they dropped 34%, from 91 to 60.

Cloud provider outages dropped 58%, from 36 to 15, and most of those occurred in South America. U.S. outages rose from two to three, or 50%.

Globally, collaboration-app network outages decreased from four to one, a drop of 75%, with the outage attributed to a single provider in the U.K. There were no outages in the U.S. for the fifth week in a row.

GitHub suffered an outage just after 2:30 a.m. EDT July 13 that lasted until 4:31 a.m. EDT. Users were affected worldwide. GitHub hasn't provided details about what caused the outage, but ThousandEyes said there are indications that the source was within GitHub services.

WhatsApp suffered an outage for about an hour on July 14 starting about 6:45 p.m. EDT that prevented users globally from sending and receiving messages on the service. Once the outage was over, users could connect to the service, but once loaded they were unable to execute any functions. WhatsApp confirmed to ThousandEyes that the cause was an internal update to servers.

Update July 6

For the week June 29-July 5, the number of global outages across all three categories increased from 199 to 208, a 5% increase. In the U.S., however, outages dropped from 83 to 63, a 24% decrease from the week prior.

Globally, the number of ISP outages decreased 5%, from 160 to 152. The number of U.S. ISP outages decreased as well, from 77 to 55 outages. Both drops represent the lowest numbers of ISP outages since February.

Worldwide, cloud-provider outages decreased by 11%, from 28 to 25. The lone cloud-provider outage recorded in the U.S. this week was a decrease of 80% from five outages the week before.

Globally, collaboration-app network provider outages increased from 0 to 2, the first outages recorded since early June. The U.S. had zero collaboration app outages this week, recording just two outages in all of

There were two noteworthy outages during the period:

On June 29 at 8:15 a.m. PDT a power failure affected the Google Compute Engine in service zones us-east1-c and us-east1-d. Customers experiencing the service interruption would not have been able to reach existing Virtual Machines or create new ones. Other zones in the region were not impacted, so a redundant architecture, where workloads are hosted in multiple zones within a region, would have mitigated user impact. Google announced that all services had been restored and the issues resolved at 1:06PM PDT.

On July 4 about 5 p.m. PDT Comcast suffered a 33-minute outage affecting U.S. uses and those in multiple other countries trying to access services using the Comcast network. The outage was caused by two events over a 40-minute period and affected Comcast nodes on the U.S. east and west coast and the central region. The outage was cleared at 5:45 p.m. PDT.

Update June 29

The total number of global outages for the week of June 22-28 decreased by 29% from the week prior, reaching the lowest number of outages observed since early April. In the U.S., the number of outages was down by 20%.

ISP outages were also down to the lowest levels recorded in the past eight weeks. Globally, the number was down by 26% this week, dropping from 216 to 160. In the U.S., ISP outages were down by 20% compared to last week, from 96 to 77.

Globally, cloud-provider outages decreased by 39% this week from 46 to 28, with the bulk being attributed to South America. In the U.S. cloud provider outages were down by 55% from 11 to five compared to the week prior.

Globally, last week saw zero collaboration app network provider outages for the second week in a row.

Comcast Cable Communications suffered a 24-minute outage affecting users across the U.S. accessing services including Zoom, Visa and Bank of America. The outage was focused on Comcast infrastructure located in Seattle, Wash., and was cleared just after 2:30AM PDT.

Update June 22

Cloud provider outages spiked to new record-level highs for the week of June 15-21. Globally, the number of cloud provider outages increased from 20 to 46, a 130% increase. In the U.S., the number of outages increased 175%, from 4 to 11.

Last week also saw record-level lows. For the first time since the week of February 24, there were zero collaboration app network provider outages both globally and in the U.S.

Globally, the number of ISP outages decreased marginally last week, dropping from 221 to 216. In the U.S., however, the number of ISP outages increased by 22%, compared to the week prior.

From a total outage perspective, the number decreased marginally globally, from 287 to 282. The U.S., however, saw a 14% increase in outages relative to the week prior. From 99 to 113 outages.

An outage of note occurred June 18 at 2:45 PDT and lasted 23 minutes, affecting multiple countries including Australia, France, Germany and the U.K. The outage affected access to Microsoft services including some identity systems and appeared to originate in Microsoft nodes in Des Moines, Iowa. The outage was divided into two outages over two hours, concluding just after 5 p.m. PDT. Click here for an interactive view of the outage.

Update June 15

During the week June 8-14, worldwide the number of total outages in all three categories rose 35%, and jumped 34% in the U.S.

ISP outages globally increased 32% from 168 to 221 and rose 14% in the U.S. from 68 to 79.

Cloud-provider outages decreased from 23 to 20 (-13%) and doubled from two to four in the U.S.

Global collaboration-network outages quadrupled from one to four worldwide and remained flat in the U.S. with one outage.

Verizon Business suffered a two-minute outage June 10 at 2:50 p.m. PDT that affected users in multiple countries trying to access services from Microsoft, Zoom and Amazon, among others. The outage centered on infrastructure in Seattle. The brevity of the problem indicates the systems were reacting automatically to address a fault.

Update June 8

During the week of June 1-7 he number of outages across all three categories of providers decreased 15% (249 to 212) worldwide vs. the week before, and dropped 29% in the U.S. (104 to 74).

ISP outages worldwide fell from 196 to 168, and in the U.S. the decline was from 91 to 68.

Public-cloud outages globally dropped from 26 to 23, and from six to two in the U.S.

Outages for collaboration-app networks all took place in the U.S. over the past two weeks and fell from seven to one.

Cable operator Spectrum sustained an outage June 2 that affected multiple channels across the U.S., with East Coast viewers suffering the worst of it for about three hours from just after 9 p.m. Eastern to around midnight.

Update June 1

The total number of outages worldwide among all three categories decreased 11% from 280 to 249 during the week of May 25-31, and declined 10% in the U.S. from 115 to 104.

The number of ISP outages decreased 13% globally from 225 to 196. In the U.S. they dropped from 109 to 91, a 17% reduction.

Public-cloud outages dropped from 35 to 26 worldwide but increased in the U.S. from two to six.

Collaboration app network provider outages totaled seven worldwide, up from four the prior week, and in the U.S. jumped seven-fold from one to seven.

Amazon suffered an outage May 28 startinn about 12:12 p.m. PDT when its website because unreachable for some users globally due to a DNS failure, making it impossible for some users to reach Amazon's servers. The DNS servers were available at the time, so the problem was likely a misconfiguration. The issue was resolved by 12:38 p.m. PDT.

Update May 25

ISP outages jumped by more than a third in the U.S. during the week ending May 24, while outages among all three categories of provider registered a small increase.

Total outages among all categories rose from 263 to 280 globally, and from 86 to 115 in the U.S.

ISP outages rose from 223 to 225 worldwide, with most of the increase due to outages in the U.S., which jumped from 80 to 109.

Public cloud outages overall rose from 24 to 35, with U.S. outages only ticking up from one to two.

Collaboration app network outages dropped from four to five compared to the week before, with a drop in U.S. outages from five to one accounting for the improvement.

There were two noteworthy outages during the week:

- * Just after 3 a.m. EDT on May 20, Google suffered an outage in the East Coast part of its network that affected users accessing site such as Uber and Shopify that are hosted by the public cloud provider. The outage lasted nine minutes and was located in the New York City metro area, and since it was during off-peak hours, impact on users was likely minimal. Click <a href="https://example.com/here-peak-noutage-peak-no
- * About 8 a.m. EDT on May 22, Hurricane Electric suffered an outage that lasted more than an hour and affected several countries. The worst part lasted 44 minutes. The outage was observed at Hurricane Electric nodes across multiple global locations, and affected users reaching sites including Microsoft, Amazon, Workday and Credit Suisse. Click <a href="https://example.com/here-th/march-new-th

Update May 18

The total outages globally leapt up 22% between the week of May 4-10 and the week of May 11-17, from 216 to 263.

ISP outages worldwide grew from 183 to 223, while those outages in the U.S. moved up from 74 to 80.

Public cloud outages grew from 13 to 24 worldwide, but dropped from three to one in the U.S.

Collaboration app providers dropped worldwide from six to five, while for the third week in a row the U.S. outages totaled five.

One noteworthy outage found users around the world unable to load content hosted by YouTube for about half an out on May 14 starting about 4 p.m. PDT. Users could connect to YouTube servers, but the service itself didn't load properly. ThousandEyes said a critical object on the site was responding erroneously, indicating a web-application issue, perhaps due to a site update or change.

Update May 11

Overall outages dropped for the second week in a row, from 282 the week before last to 216 (23%) last week. In the U.S. outages fell from 98 to 83 (15%).

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ISP outages worldwide were down 22% (from 236 to 183) and in the U.S. they fell 18% (from 90 to 74).

Cloud networking outages dipped from 13 to 12 (7%) worldwide, and in the U.S. dropped from 3 to 1 (66%)

Collaboration-application network outages fell worldwide from seven to six (14%) and stayed steady in the U.S. at five.

ISP Cogent Communications suffered a notable 38-minute outage starting on May 5 about 12 a.m. PDT, affecting its infrastructure in the U.S., U.K., Canada and France. Traffic terminated in Cogent's network, and users were unable to reach sites such as Amazon, Microsoft, WorldPlay and Oracle Cloud.

Update May 3

Overall, the number of outages dropped across the board last week, from 313 to 282, a decrease of 31worldwide, mainly due to a drop in overall U.S. outages from 132 to 98.

Most of that was driven by a decline by at least half of outages for both ISPs and collaboration providers.

Total ISP outages dipped from 250 down to 236 globally, while ISP outages in the U.S. went from 124 to 90. That's the second week in a row of declines.

Worldwide, collaboration provider outages dropped from 14 to seven, but rose from three to five in the U.S.

Public-cloud outages also declined week-over-week from 26 to 12 globally and from four to one in the U.S.

Virgin Media suffered a noteworthy outage during the evening of April 27 in the UK, Ireland and the Netherlands. It started at 5:15 p.m. local time and lasted 15 minutes, then again at 6:15 for another 15 minutes. The pattern repeated several more times, transitioning to briefer outages that ended by 1:30 a.m. April 28. Based on the pattern, Thousand Eyes suggests that an automation issue could have been the root cause, though no official reason had been made public.

Update April 27

Globally, outages hit a record high during the week of April 20-26 – 313 – up 11% from the week prior and up 77% from the temporary decrease the week of April 6. The number of outages is the most since the end of March, but two issues – fiber cuts in CenturyLink's network and a broad Tata Communications outage – helped push that number up. Outages in the U.S. hit record numbers, too, at 132.

The ISP outages worldwide tallied 250, and in the U.S. spiked to 124, a new high including the CenturyLink and Tata problems.

After a two-week downward trend, cloud provider outages globally increased to 26, the same levels registered in late March and early April. In the U.S. they went down slightly from six to four. Overall, these numbers are still in the normal range and in general, cloud providers continue to hold up well.

Collaboration-application-network outages increased slightly over the previous week from 11 to 14 but continue to remain low relative to the peak of 29 observed in the week of March 30-April 5. U.S. outages dipped from four to three.

The <u>major outage in the Tata Communications</u> network on April 20 affected its infrastructure in the U.K., France, Germany, and India. Around 11 a.m. local U.K. time, traffic attempting to reach services such as Amazon, ServiceNow, and Oracle Cloud began terminating in its network, affecting local users, users in the U.S. and elsewhere. The outage lasted about 20 minutes, and affected more than 80 network interfaces across multiple regions and cities.

Another far reaching outage occurred the next day in the U.S., when at least one <u>fiber cut within</u> <u>CenturyLink's network</u> in Southern California affected enterprises and consumer users up and down the West Coast, and as far away as Raleigh, NC. It affected the Level 3 part of CenturyLink's network, a transit provider it acquired in 2017. Merrill Lynch <u>reported</u> a disruption to its business as a result of the network outage, during which its brokers were intermittently unable to access their workstations. The incident started hitting enterprises and their users around 10 a.m. ET, with most disruption resolved by around 11:30 a.m. ET.

Update April 20

Total outages spiked 58% during the week of April 13-19 fueled by one prolonged outage that had a significant effect on multiple ISPs.

That one outage affected TeliaNet, Level 3, AT&T, and other ISPs on April 13. TeliaNet was the most affected of the group, and it's not clear whether it was the cause of the outage, ThousandEyes says. During the downtime, at least one application provider withdrew route through the TeliaNet network until the next day.

Had that one outage not occurred, the total number of outages for the week would have been in the low 200s, which ThousandEyes says is in the normal range. As it turned out, total outages rose 59% from 177 to 282.

ISP outages jumped from 141 to 243 week over week, up 72% worldwide, and from 56 to 98 (75%) in the U.S.

Public cloud outages dropped off from the week before, from 19 to 14 (down 36%) worldwide, and stayed steady at six outages in the U.S.

Global application-provider networks had a slight increase in outages worldwide, up from 9 to 11 (22%), but dropped from 9 to 4 in the U.S., down 55%.

In other major outages, ThousandEyes said it appeared that several banks effectively suffered denial of service conditions when customers apparently flooded their sites seeking to find out whether they'd received their pandemic-related stimulus checks. Content-delivery networks serving the banks didn't have network issues yet were unable to return Web content for many banking sites, "likely due to bank origin servers unable to handle the high volume of requests," ThousandEyes says.

Update April 13

During the week April 6-April 12, service outages for ISPs, cloud providers, and conferencing services dropped overall. They went from 298 down to 177 globally (40%, a six-week low), and in the U.S. dropped from 129 to 72 (44%).

Globally, ISP outages were down from 229 to 141 (38%), and in the U.S. were down from 100 to 56 (44%).

Cloud provider outages were also down overall from 25 to 19 (24%), ThousandEyes says, but jumped up from one to six (500%) in the U.S., which saw the highest rate of increase in seven weeks. Even so, the U.S. total was relatively low. "Again, cloud providers are doing quite well," ThousandEyes says.

Conferencing services recovered from a spike the week before, and all of the outages – nine – were i.n the U.S. Globally outages dropped from 29 to nine (68.9%), and in the U.S. from 25 to nine (64%).

Update April 6

Outages for ISPs globally were down 9.13% during the week of March 30 from the week before, whereas U.S. outages were down 16.7%, dropping from 120 to 100. Worldwide the outages were also down, from 252 to 229. Public cloud outages rose worldwide from 22 to 25, and in the U.S. there was one outage, up from zero the previous week.

Outages for collaboration apps rose dramatically, increasing more than 260% globally and more than 500% in the U.S. over the week before. The actual numbers were an increase from eight to 29 worldwide, and up from 4 to 25 in the U.S.

ISP Cogent Communications suffered what ThousandEyes called a significant outage April 1 from 12:30 p.m. to 12:35 p.m. Pacific time that affected the ability of users to connect to sites and service such as Office 365. Because Cogent peers with other providers, the customers of those providers might have experienced disruption to some services as well.

Access to Yelp and some applications and sites hosted by AWS and Cloudflare were unreachable between 12:35 and 12:40 p.m. Pacific time on April 1 when Russian ISP Rostelecom leaked illegitimate IP address prefixes to its ISP peers, including Level 3. Such leaks lead to incorrect or less than optimal routing, according to ThousandEyes.

In this case, the leak improperly inserted Rostelecom into the network path between users and the affected providers. Level 3 propagated those improperly advertised routes to its peers, setting off a chain of events that led to massive traffic drops during the outage time.

Update March 31

Looking at data over the past six weeks, ThousandEyes finds that the combined worldwide service outages among ISPs, public cloud providers, conferencing services and edge networks (content-delivery networks, DNS, and security as a service) has risen 42%.

Cloud-provider performance hasn't been affected much at all, and in fact multiple weeks last year had a much higher number of outages.

Week of March 23

Between the week of March 16 and March 23, the outages suffered by ISPs worldwide went down from 230 to 203, nearly 12% lower. In the U.S., the number of outages rose from 100 to 107, up 7%.

Public cloud outages were down both worldwide and in the U.S. Worldwide, they dropped from 21 to 15 (down 28%), and in the U.S. dropped from six to zero. There was a service disruption to Google traffic due to a router failure in Atlanta, it did not meet ThousandEyes' definition of an outage, and it wasn't related to COVID-19.

Collaboration applications also showed a decline in outages from the week before, dropping from 15 to six worldwide, and down from seven to three in the U.S., reductions of 60% and 57%, respectively.

ThousandEyes highlighted what it considered significant outages:

- * "Cogent Communications suffered yet another significant outage this week its fifth major outage this month. The outage occurred within parts of Cogent's network in Northern California and Oregon and impacted users connecting to sites and services in those regions, including projectbaseline.com, the website of Verily's much-publicized COVID-19 testing program."
- * "For approximately 20 minutes on March 25th, ThousandEyes observed that some users located on the East Coast may not have been able to reach Google services due to 100% traffic loss. A short time later, Google's SVP of Engineering tweeted that the incident was due to a router failure in Atlanta, Georgia. US users outside of the Northeast were also impacted intermittently, although they would have experienced the incident as site errors when trying to reach some Google sites, such as google.com. The HTTP server errors seen during this period are consistent with an inability to reach the backend systems necessary to correctly load various services. Any traffic traversing the affected region connecting from Google's front-end servers to backend services may have been impacted and seen the resulting server errors."

With the increased use of remote-access VPNs, major carriers are reporting dramatic increases in their network traffic – with Verizon reporting a 20% week-over-week increase, and Vodafone reporting an increase of 50%.

While there has been no corresponding spike in outages in service provider networks, over the past six weeks there has been a steady increase in outages across multiple provider types both worldwide and in the U.S., all according to ThousandEyes, which keeps track of internet and cloud traffic.

IDG Special Report: Navigating the Pandemic* <u>Business continuity: Coronavirus crisis puts CIOs' plans to</u> the test

- * Coronavirus challenges remote networking
- * A security guide for pandemic planning: 7 key steps
- * 10 tips to set up your home office for videoconferencing
- * How to survive and thrive while working from home
- * WTH? OSS knows how to WFH IRL

This includes "a concerning upward trajectory" since the beginning of March of ISP outages worldwide that coincides with the spread of COVID-19, <u>according to a ThousandEyes blog</u> by Angelique Medina, the company's director of product marketing. ISP outages worldwide hovered around 150 per week between Feb. 10 and March 19, but then increased to between just under 200 and about 225 during the following three weeks.

In the U.S. those numbers were a little over 50 in the first time range and reaching about 100 during the first week of March. "That early March level has been mostly sustained over the last couple of weeks," Medina writes.

Cogent Communications was one ISP with nearly identical large scale outages on March 11 and March 18, with "disruptions for the fairly lengthy period (by Internet standards) of 30 minutes," she wrote.

Hurricane Electric suffered an outage March 20 that was less extensive and shorter than Cogent's but included smaller disruptions that altogether affected hundreds of sites and services, she wrote.

Public-cloud provider networks have withstood the effects of COVID-19 well, with slight increases in the number of outages in the U.S., but otherwise relatively level around the world. The possible reason: "Major public cloud providers, such as AWS, Microsoft Azure, and Google Cloud, have built massive global networks that are incredibly well-equipped to handle traffic surges," Medina wrote. And when these networks do have major outages it's due to routing or infrastructure state changes, not traffic congestion.

Some providers of collaboration applications – the likes of Zoom, Webex, MSFT Teams, RingCentral – also experienced performance problems between March 9 and March 20. ThousandEyes doesn't name them, but does list performance numbers for what it describes "the top three" UCaaS providers. One actually showed improvements in availability, latency, packet loss and jitter. The other two "showed minimal (in the grand scheme of things) degradations on all fronts — not surprising given the unprecedented strain they've been under," according to the blog.

Each provider showed spikes in traffic loss over the time period that ranged from less than 1% to more than 4% in one case. In the case of one provider, "outages within its own network spiked last week, meaning that the network issues impacting users were taking place on infrastructure managed by the provider versus an external ISP."

"Outage incidents within large UCaaS provider networks are fairly infrequent; however, the recent massive surge in usage is clearly stressing current design limits. Capacity is reportedly being added across the board to meet new service demands," according to the blog.

Meanwhile, ThousandEyes has introduced a new feature on its site a <u>Global Internet Outages Map</u> that is updated every few minutes. It shows recent and ongoing outages

Google outage unrelated to COVID-19

On March 26 Google suffered a 20 minute outage on the East Coast of the U.S., apparently from a router failure in Atlanta, ThousandEyes said, agreeing with a statement put out by Googe to that effect.

margin: 0in; margin-bottom: .0001pt; That problem affected other regions of the U.S. as evidenced by Google sites such as google.com intermittently returning server errors. "These 500 server errors are consistent with an inability to reach the backend systems necessary to correctly load various services," ThousandEyes said in a statement. "Any traffic traversing the affected region — connecting from Google's front-end servers to backend services — may have been impacted and seen the resulting server errors."

margin: 0in; margin-bottom: .0001pt; Thousand Eyes posted interactive results of tests it ran about the outage here and here.

co televk : Telia Company AB

iappsp: Cloud Computing | i8394: Computer Services | ibcs: Business/Consumer Services | idserv: Data Services | iint: Online Service Providers | itech: Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications

NS gblac : Blackouts | ccat : Corporate/Industrial News | gcat : Political/General News | gdis : Disasters/Accidents | gmmdis : Accidents/Man-made Disasters

RE usa: United States | atInt: Atlanta | basqu: Basque Country | dallas: Dallas | denver: Denver | frank: Frankfurt | incheo: Incheon | Ivegas: Las Vegas | seattl: Seattle | skorea: South Korea | soap: Sao Paulo | sydney: Sydney | uk: United Kingdom | usco: Colorado | usmn: Minnesota | usnv: Nevada | usoh: Ohio | ustx: Texas | tokyo: Tokyo | apacz: Asia Pacific | asiaz: Asia | ausnz: Australia/Oceania | austr: Australia | braz: Brazil | bric: BRICS Countries | dach: DACH Countries | devgcoz: Emerging Market Countries | dvpcoz: Developing Economies | easiaz: Eastern Asia | eecz: European Union Countries | eurz: Europe | gfr: Germany | hesse: Hesse | jap: Japan | kanag: Kanto | lamz: Latin America | medz: Mediterranean | namz: North America | nswals: New South Wales | samz: South America | spain: Spain | usc: Midwest U.S. | usga: Georgia (US) | uss: Southern U.S. | usw: Western U.S. | uswa: Washington State | weurz: Western Europe

IPD Networking

PUB IDG Communications Inc.

AN Document NWW0000020220330ei3t00001



HD ETNO chief executives meet Vestager in Brussels

WC 157 words

PD 29 March 2022

SN Telecompaper Europe

SC TELEUR English

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LP

European telecom industry group <u>ETNO</u> said CEOs representing the continent's leading operators met with European Commission Executive Vice-President Margrethe Vestager in Brussels on 29 March to discuss a number of issues, including the sector's response to the Ukraine crisis. Additional areas covered were the telecom industry's contribution to European economy and society, the issue of scale and competitiveness in European markets, the importance of removing barriers to the EU single market and the <u>sustainability</u> of the telecom and internet ecosystems across the continent.

TD

ETNO CEOs attending the meeting included Pietro Labriola, making his first appearance in Brussels since being appointed CEO of Telecom Italia (TIM), Jose Maria Alvarez-Pallete (Telefonica), Sigve Brekke (Telenor), Allison Kirkby (Telia Company), Thomas Arnoldner (A1 Telekom Austria Group), Guillaume Boutin (Proximus), Mari-Noelle Jego-Laveissiere (Orange Group deputy CEO), Lise Fuhr (director general, ETNO) and Steven Tas (executive board chairman, ETNO).

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS cslmc : Senior Level Management | ccat : Corporate/Industrial News | c411 : Management Moves | c41 : Management | ncat : Content Types | nfact : Factiva Filters | nfcpex : C&E Executive News Filter | nfcpin : C&E Industry News Filter

RE belg: Belgium | brus: Brussels | eurz: Europe | benluxz: Benelux Countries | eecz: European Union Countries | weurz: Western Europe

PUB Telecompaper BV

AN Document TELEUR0020220329ei3t000dz



SE Extra

HD Google, Spotify's in-app payment deal; EU agreement on Digital Markets Act

BY Frances Josephine Espeso

WC 897 words

PD 24 March 2022

SN SNL Financial Extra

SC SNLFE

LA English

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LP

TOP NEWS IN TMT

* Alphabet Inc.'s Google LLC will allow audio-streaming **platform**Spotify Technology SA, parent of Spotify AB, to offer an alternative in-app **payment** method to users, Dow Jones Newswires reported. Under the deal, Spotify's app available on Google Play Store will allow users a choice between Google's **payment** mechanism and the streaming **platform**'s alternative **payment** method.

TD

- * The European Commission is expected to reveal the Digital Markets Act this week after an agreement was reached over the size of the firms that will be covered under the purview of the legislation, the Financial Times (London) reported. Designed to rein in large technology platforms deemed as "gatekeepers," the act will target companies with a market capitalization of at least €75 billion, and those with a core online platform with at least 45,000 active users.
- ➤ Data Dispatch: Mandiant multiple sets pace for cybersecurity M&A in 2022

The median 2022 cybersecurity deal valuation as of March 18 was 11.6x trailing-12-month revenue, matching the Mandiant deal multiple. That compared to 12.9x trailing-12-month revenue for the same period of 2021.

➤ Data Dispatch: Media, telco capital offerings raise \$5.71B in February

Capital markets activity in publicly traded media and telecom companies in the U.S., Canada and Bermuda picked up in February, bringing in \$5.71 billion, according to S&P Global Market Intelligence data

TECHNOLOGY

- * Snap Inc. acquired French neurotech company NextMind SAS for an undisclosed amount. The acquisition will help bolster Snap's long-term research efforts in augmented reality.
- * Ukrainian Minister of Digital Transformation Mykhailo Fedorov said the country is using facial recognition technology to identify Russian soldiers killed in combat, Reuters reported.

INTERNET & OTT

- * Google said it will not run advertisements along with content that misrepresents information about Russia's invasion of Ukraine, Reuters reported, citing a spokesperson. This comes after Russia banned the Google News service for allowing "unreliable, publicly significant information" about Russia's incursion into Ukraine, according to Interfax news agency.
- * The U.K.'s defense ministry called on YouTube LLC to help remove videos allegedly manipulated by Russian state forces, according to a tweet.
- * Meta Platforms Inc. is reviewing a plan to appeal a €17 million penalty imposed by the Irish Data Protection Commission after the regulator investigated 12 data breach notifications in 2018, Irish Independent (Dublin) reported, citing a spokesperson.

- * Russia's communications regulator launched a case against Netherlands-registered internet company Yandex NV following a data leak that compromised the personal data of over 58,000 users of the company's food-delivery app, according to Reuters. Yandex is facing a fine worth up to 100,000 Russian rubles.
- * Amazon.com Inc. will open a new logistics base in Turkey with an investment of over \$100 million, Reuters reported, citing a statement.
- * Norlys AS' board of representatives approved the sale of a 35% holding in fiber network subsidiary Norlys Tele Service A/S to a consortium comprising Dutch pension fund PGGM and Electricité de France SA unit EDF Invest, wrote Berlingske.
- * French over-the-top platform Alchimie SAS launched Alchimie Space, an immersive production studio for program creators.

MEDIA

- * Thomson Reuters Corp.'s Reuters news agency removed Russian state-owned news outlet TASS from its content marketplace for customers amid criticisms over latter's coverage of Russia's invasion of Ukraine, according to Reuters, citing an internal staff memo.
- * The British Broadcasting Corp. lodged a new appeal with the United Nations against Iran over online attacks aimed at female journalists at BBC News Persian.

TELECOMMUNICATIONS

- * U.S. private equity firm KKR & Co. Inc. sought another opportunity to conduct due diligence at Telecom Italia SpA, reiterating its interest in a takeover offer for the Italian telco, Bloomberg News reported, citing sources.
- * Deutsche Telekom AG's work councils requested the company board shutter Russian offices and sever all business ties with Russia, according to Telecompaper, citing Handelsblatt.
- * The Belgian Institute for Postal Services and Telecommunications announced that Telenet, Proximus, Orange Belgium SA, Cegeka NV unit Citymesh NV and IT company NRB applied for 5G licenses, DataNews reported.
- * Motorola Solutions Inc. acquired mobile radio communications provider Tetra Ireland Communications Ltd. for an undisclosed amount, Dow Jones Newswires reported.
- * Telia Lietuva AB signed two agreements worth up to €7 million with Lietuvos Gelezinkeliai Ab, which will see the Telia Co. AB's Lithuanian unit design and implement data transmission solutions for the railway company's network.

FILM & TV

* Deutsche Telekom will broadcast the 2022 FIFA World Cup live on MagentaTV from Nov. 21. MagentaTV will show all 64 World Cup matches live in ultra-high definition, with exclusive coverage of 16 games.

Click here for a summary of indexes on the S&P Capital IQ Pro platform.

Subscribe here to our new weekly feature, APAC TechWatch, which highlights the latest on topics such as artificial intelligence, financial technology, the internet of things, cloud computing, cybersecurity, 5G and semiconductors in the Asia-Pacific region.

Anne Freier, Amanda Kelly, Charlotte van Hek Gerard O'Dwyer contributed to this report.

The Daily Dose has an editorial deadline of 7 a.m. London time. Some external links may require a subscription. Links are current as of publication time, and we are not responsible if those links are unavailable later.

- **CO** gognew : Google LLC | goog : Alphabet Inc. | sptfts : Spotify Technology SA | sptfum : Spotify AB | televk : Telia Company AB
- i3302 : Computers/Consumer Electronics | imssoft : Streaming Services | idistr : Media Content Distribution | iint : Online Service Providers | imed : Media/Entertainment | itech : Technology | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | i8395464 : Internet Search Engines

- NS cacqu : Acquisitions/Mergers | c181 : Acquisitions/Mergers/Shareholdings | ccat : Corporate/Industrial News | c18 : Ownership Changes | cactio : Corporate Actions | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter
- RE russ: Russia | ukrn: Ukraine | asiaz: Asia | bric: BRICS Countries | devgcoz: Emerging Market Countries | dvpcoz: Developing Economies | eeurz: Central/Eastern Europe | eurz: Europe | ussrz: CIS Countries
- IPD Industry News
- PUB S&P Global Market Intelligence
- AN Document SNLFE00020220325ei3o000b6

HD Telia Company issues green hybrid bond of €500m

WC 291 words

PD 23 March 2022

SN Capacity Magazine

SC CAPMAG

LA English

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LP

Telia Company has issued a second green hybrid bond of €500 million with the proceeds set to finance more energy efficient networks.

The firm revealed that this will include the Swedish network transformation from copper to fibre and deployment of 5G, as well as digital solutions that will enable customers to reduce energy use and emissions.

TD

The hybrid bond is issued as part of Telia's refinancing of the upcoming call dates for outstanding hybrid bonds in October 2022 and April 2023.

"The volatility in the financial markets during the start of 2022 has been challenging hence we are very pleased to have taken the opportunity to refinance part of our coming hybrid calls and issue another green hybrid bond as part of our ambition to integrate sustainability also in our funding activities," Agneta Wallmark, VP head of group treasury at Telia Company said.

That volatility has not been helped by global bond markets suffering "unprecedented losses" since last year's peak.

The Bloomberg Global Aggregate Index has fallen 11% from January 2021 levels, resulting in the biggest decline from a peak in data since 1990.

Rising inflation across the world adds to the uncertainty, meaning the allure of holding debt, including government bonds is diminishing.

Nonetheless, Wallmark says the investments will increase energy efficiency and unlock the environmental benefits of digitalisation in various sectors, including through Telia's own digital solutions that are enabling customers to reduce energy use and greenhouse gas emissions.

The bond has a maturity of 61.25 years with the first reset date after 6.25 years. It is expected to be rated two notches below Telia's senior rating and will be treated as 50% equity and 50% debt.

co televk : Telia Company AB

NS c172 : Corporate Debt Instruments | ccat : Corporate/Industrial News | c17 : Corporate Funding | cactio : Corporate Actions | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

IPD News

PUB Euromoney Trading Limited

AN Document CAPMAG0020220411ei3n0001I



HD Upgrade of data transmission network for Lithuanian Railways

BY Karolis Broga WC 445 words

PD 23 March 2022

SN Lithuanian News Agency - ELTA

SC ELTA

LA English

CY (c) 2022 Lithuanian News Agency - ELTA

LP

Vilnius, March 23 (ELTA) – Telia Lietuva and Lithuanian Railways (LTG) have signed two agreements according to which Telia Lietuva will design and implement data transmission solutions in the LTG network. Both agreements might be worth up to EUR 7 million, Telia announced in a statement.

It will be one of the largest projects on LTG network modernisation in Lithuania in the last decade. It will cover all levels – starting from replacement of network nodes, implementation of security and network management systems and finishing with **cable** installation and transfer of the existing services to the upgraded network.

TD

"This agreement is a very important opportunity for us to make use of our knowledge and experience in designing and implementing data transmission networks. The fact that the structure of the network which we ourselves continuously develop and maintain is very similar to the planned critical network of LTG gives as an additional advantage," Daniel Karpovič, the head of enterprise at Telia Lietuva, said.

The maximum value of the contracts signed by Telia Lietuva and LTG amounts to around EUR 7 million in total, excluding VAT. However, depending on the outcome of the negotiations and the final proposals received, the project costs may be lower.

The project consists of five parts, responsibility for which will be assumed by different suppliers and will be carried out in stages. Telia Lietuva will be responsible for two parts of the project. The signed agreements stipulate that the company will develop the LTG network architecture, design and deploy optical signal multiplexing and critical data networks, and deliver the necessary equipment for these networks within two years. It will also ensure coordination of the project with other suppliers and compatibility of their solutions.

One of the major works is the migration of the existing systems and services into the new network. To implement this stage, Telia Lietuva plans to use its extensive experience in the field of data transmission network maintenance. Prior to the commencement of the main project works, deployers of the critical and corporate networks will be required to demonstrate the suitability of the proposed solutions by demonstrating the operation of the solutions in the LTG infrastructure.

LTG data transmission network is an integral part of the railway infrastructure, it is the main mean connecting railway users, business, communication, information and traffic management systems. Reliable data transmission will be important for smooth and secure traffic of trains and for effective operation of the companies within the Group.

The LTG data network upgrade is expected to make it even more secure, reliable, easier to maintain and manage. It will also significantly increase data transmission speed.

CO litral: Lithuanian Railways | Itvcom: Telia Lietuva AB | televk: Telia Company AB

IN i71: Rail Transport | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications | irailtr: Land Transport | itsp: Transportation/Logistics

RE lith: Lithuania | baltst: Baltic States | eecz: European Union Countries | eeurz: Central/Eastern Europe | eurz: Europe

PUB Lithuanian News Agency - ELTA

AN Document ELTA000020220323ei3n001xh



HD Telia Lithuania to upgrade data network for Lithuanian Railways

WC 217 words

PD 23 March 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Lithuania and Lithuanian Railways (LTG) have signed two agreements according to which Telia Lithuania will design and implement data transmission services in the LTG network. Together the contracts are worth up to EUR 7 million.

It will be one of the largest projects on LTG network modernisation in Lithuania in the last decade, Telia said. It will cover all levels – starting from replacement of network nodes, implementation of security and network management systems and finishing with **cable** installation and transfer of the existing services to the upgraded network.

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CO litral: Lithuanian Railways | televk: Telia Company AB

i7902 : Telecommunication Services | i71 : Rail Transport | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | irailtr : Land Transport | itsp : Transportation/Logistics

NS ccat : Corporate/Industrial News

RE lith: Lithuania | eurz: Europe | baltst: Baltic States | eecz: European Union Countries | eeurz:

Central/Eastern Europe

PUB Telecompaper BV

AN Document TELEUR0020220323ei3n0008k



WC PD

PD ET

SN SC LA CY

LP

HD

Transmission Network for Lithuanian Railways 482 words

Press Release: Telia Lietuva to Upgrade Data

23 March 2022

07:30

Dow Jones Institutional News

DJDN English

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Telia Lietuva and Lithuanian Railways (Lietuvos Gele inkeliai) (LTG) have signed two agreements according to which Telia Lietuva will design and implement data transmission solutions in the LTG network. Both agreements might be worth up to EUR 7 million.

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"This agreement is a very important opportunity for us to make use of our knowledge and experience in designing and implementing data transmission networks. The fact that the structure of the network which we ourselves continuously develop and maintain is very similar to the planned critical network of LTG gives as an additional advantage," -- Daniel Karpovič, Head of Enterprise at Telia Lietuva, said.

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Darius D iaugys,

Head of Investor Relations.

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e-mail·

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(END) Dow Jones Newswires

March 23, 2022 03:30 ET (07:30 GMT)

litral : Lithuanian Railways | Itvcom : Telia Lietuva AB |

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СО

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HD Telia Lietuva to Upgrade Data Transmission Network for Lithuanian Railways

WC 418 words

PD 23 March 2022

ET 07:30

SN Nasdag / Globenewswire

SC HUGNEN

LA English

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LP

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TD

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Darius Džiaugys, Head of Investor Relations, tel. +370 5 236 7878, e-mail: darius.dziaugys@telia.lt

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IPD Telecommunications

PUB NASDAQ OMX Corporate Solutions International Limited

AN Document HUGNEN0020220323ei3n000rt



HD Arelion Opens Additional Norway Fiber Route to Continental Europe

BY posted by Arelion

WC 338 words

PD 22 March 2022

SN Total Telecom Plus

SC TOTEL

LA English

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LP

Arelion (previously Telia Carrier) today announced the completion of its latest backbone route expansion in Norway. The additional fiber route brings a new level of resilience, capacity and diversity for connections between Norway and the rest of the world, via continental Europe. Arelion (then Telia Carrier) was awarded the contract to build a new subterranean Internet route for Norway by the Norwegian Communications Authority in July 2020. The project goal was to provide greater resilience in the event a serious incident impacting **connectivity**, and ensuring the future **connectivity** needs of the region could be met. The new 750km fiber route runs from Oslo, Norway to Esbjerg, Denmark where it joins the wider Arelion pan-European network. It also includes two new PoP (points of presence) locations, in Bulk Fiber Networks' OS-IX DC in Oslo and Bulks Fiber Networks' N01 DC in Kristiansand.

TD

The new route doubles available capacity in the region, and will support new data center infrastructure, ensuring future traffic needs can be met for years to come. Elise K. Lindeberg, Director, Security Department at the Norwegian Communications Authority, said, "This new secure route for electronic communications, which was awarded to Arelion, will help Norway address its growing and diverse traffic needs to Europe and provide increased connection security for our nation, in the event of serious incidents occurring." Services available through Arelion on the new route include IP, Wavelength and Ethernet offerings, making sure that customers can access state-of-the-art secure connectivity to the European continent that will meet the needs of all cloud providers, data centers and enterprises. One section of the new route employs the HAVSIL subsea cable, that was built by Bulk Fiber Networks. Staffan Göjeryd, CEO at Arelion said, "Resilient and secure connectivity across the globe has never been more important. Ensuring Norway's access to Internet through this new, diverse route to the European continent really embodies our company mission, to keep the world connected."

RF 512826

co nwpta: Norwegian Communications Authority | televk: Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS ccat: Corporate/Industrial News | c333: Non-Government Contracts/Orders | c33: Contracts/Orders |

ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE norw: Norway | eurz: Europe | nordz: Nordic Countries | scandz: Scandinavia

IPD News

PUB Terrapinn Limited

AN Document TOTEL00020220322ei3m00004

HD Arelion completes Norway to Continental Europe fibre route

WC 323 words

PD 21 March 2022

SN Capacity Magazine

SC CAPMAG

LA English

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LP

Arelion, formerly Telia Carrier, confirms the completion of its **fibre** backbone route expansion in Norway.

According to the company, this new fibre route adds much-needed resilience, capacity and diversity to connections between Norway and the rest of the world, via continental Europe.

TD

"This new secure route for electronic communications, which was awarded to Arelion, will help Norway address its growing and diverse traffic needs to Europe and provide increased connection security for our nation, in the event of serious incidents occurring," said Elise K. Lindeberg, director of security department at the Norwegian Communications Authority.

The 750km fibre route starts in Oslo, Norway linking to Esbjerg, Denmark where it connects to the wider Arelion pan-European network. It also includes two new points of presence locations, at Bulk Fiber Networks' OS-IX data centre in Oslo and its N01 data centre in Kristiansand.

Before rebranding as Arelion, Telia Carrier was awarded the contract to build a new subterranean Internet route for Norway in July 2020 by the Norwegian Communications Authority. The aim of the project goal was to provide greater resilience in the event of a serious incident that effects connectivity and future proofing the region for subsequent connectivity needs by doubling available capacity.

"Resilient and secure connectivity across the globe has never been more important," said Staffan Göjeryd, CEO at Arelion.

"Ensuring Norway's access to Internet through this new, diverse route to the European continent really embodies our company mission, to keep the world connected."

Arelion will offer a number of services on the new route including IP, wavelength and Ethernet solutions, meeting the needs of all cloud providers, data centres and enterprises.

One section of the new route employs the HAVSIL subsea cable, that was built by Bulk Fiber Networks. Earlier this month, Havsil completed the construction of the terrestrial segment of the system, while the subsea segment was confirmed in September 2021.

co nwpta: Norwegian Communications Authority | televk: Telia Company AB

iN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS ccat: Corporate/Industrial News

RE norw: Norway | eurz: Europe | nordz: Nordic Countries | scandz: Scandinavia

IPD News

PUB Euromoney Trading Limited

AN Document CAPMAG0020220411ei3l0000c



HD Telia Norway wins Opensignal 5G gaming service accolade for August-October 2021

WC 118 words

PD 21 March 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Norway said that Opensignal named it winner in the 5G **gaming** category in its 5G Mobile Experience Awards Norway. It said it scored 85.4 points out of 100, compared with the second-placed winner at 81.2 points. Telia was rated "excellent" for exceeding 85 points.

In the other categories, Telia tied as joint winner with Telenor Norway. These categories were 5G video service, 5G voice app service, 5G download speed,5G upload speed and 5G availability.

TD

Third mobile network operator Ice only launched its 5G network commercially in November 2021, and Opensignal's assessment covered the period 01 August to 29 October 2021.

co tvk : Telenor ASA | televk : Telia Company AB

IN i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202:

Mobile Telecommunications

NS ccat : Corporate/Industrial News | ccawrd : Corporate Awards

RE eurz: Europe | norw: Norway | nordz: Nordic Countries | scandz: Scandinavia

PUB Telecompaper BV

AN Document TELEUR0020220321ei3l0008f



HD Telia is Sweden's most sustainable telecoms brand in 2022, Swish top for digital services

WC 95 words

PD 17 March 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Company said that Swedish consumers have named Telia as Sweden's most sustainable telecoms brand for the twelfth year in a row. The Sustainable Brand Index for 2022 was drawn up based on surveys of 24,300 respondents concerning 409 brands in 35 different sectors. Payment services provider Swish was ranked as the leading brand in the "digital services" category and came 31st overall.

Looking at all 409 brands, Telia was ranked 160th, with furniture chain Ikea coming top.

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 :

Mobile Telecommunications

NS ccat : Corporate/Industrial News | cbrand : Branding | ccsr : Corporate Social Responsibility | nran :

Rankings | c31 : Marketing | cesg : Environmental/Social/Governance | ncat : Content Types | nfact :

Factiva Filters | nfcpex : C&E Executive News Filter | nfcpin : C&E Industry News Filter

RE swed: Sweden | eurz: Europe | eecz: European Union Countries | nordz: Nordic Countries | scandz

: Scandinavia

PUB Telecompaper BV

AN Document TELEUR0020220317ei3h0008d



HD Telia cuts CO2 emissions by 78% in 2021 compared with 2018 base

WC 201 words

PD 11 March 2022

SN Telecompaper World

SC TELWOR
LA English

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LP

Telia Company said in its <u>annual and <u>sustainability</u> report for 2021 that it reduced carbon dioxide emissions by 78 percent last year compared with 2018, against a 79 percent cut in 2020. The operator said 27 percent (16%) of supply chain greenhouse gas emissions were covered by science-based climate targets. It recycled or re-used 74 percent of waste from its own operations, too.</u>

Telia reported a 13 percent reduction in emissions from the use of sold and leased products in 2021 compared with 2018, the first time that the operator has declared this measure. Second hand mobile phones accounted for 3 percent of all B2C handset sales in 2021, up from 2 percent in 2020. Sales of mobile phones provided as "Device as a Service" (DaaS) to business customers made up 21 percent of handset sales, up from 17 percent in 2020.

TD

Telia added that 608,000 people were reached by digital inclusion schemes in 2021. Its extended leadership team had 37 percent female representation, down from 38 percent in 2020. It put its employee engagement score at 76 percent, down from 78 percent the year before.

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS cemis: Emissions | cesgr: ESG Reports | ccat: Corporate/Industrial News | cenvire: Corporate

Environmental Responsibility | cesg : Environmental/Social/Governance

PUB Telecompaper BV

AN Document TELWOR0020220311ei3b000gg



Telia Company: Telia Company presents its Annual HD and Sustainability Report 2021 WC 213 words 11 March 2022 PD 08:00 ET Dow Jones Institutional News SN SC DJDN **English** LA CY Copyright © 2022, Dow Jones & Company, Inc. TD The report is now available for download www.teliacompany.com (https://www.teliacompany.com/en/). The Swedish Annual Report 2021 is also available on Telia's website in European Single Electronic Format (ESEF). For more information, please contact Telia Company press office, +46 771 77 58 30, visit our Newsroom http://www.teliacompany.com/sv/nyhetsrum/ or follow us on Twitter @Teliacompany (https://twitter.com/Teliacompany). We are Telia Company. Our approximately 20,000 talented colleagues serve millions of customers every day in one of the world's most connected regions. With a strong connectivity base,

This information was brought to you by

ecosystem, empowering people, companies

with everything that matters 24/7/365 -

we're the hub in the digital

and societies to stay in touch

on their terms. Read more at

www.teliacompany.com

Cisionhttp://news.cision.com https://news.cision.com/teliacompany/r/telia-company-presents-itsannual-and-sustainability-report-2021, c3522382 The following files are available for download: https://mb.cision.com/Main/40/3522382/154

6730. pdfTelia Company Annual and Sustainability Report 2021 (PDF)

https://mb.cision.com/Main/40/3522382/154
6740.zip

(END) Dow Jones Newswires

March 11, 2022 03:00 ET (08:00 GMT)

CO televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless

Telecommunications Services | i7902202 : Mobile

Telecommunications

NS ccat : Corporate/Industrial News | ccsr : Corporate

Social Responsibility | neqac : Equities Asset Class News | cesg : Environmental/Social/Governance | ncat : Content Types | nfact : Factiva Filters | nfcpex : C&E

Executive News Filter

PUB Dow Jones & Company, Inc.

AN Document DJDN000020220311ei3b000pe



HD Telia Norway picks 7 start-ups for third annual mentorship scheme

WC 217 words
PD 7 March 2022

SN Telecompaper Europe

SC TELEUR LA English

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LP

Telia Norway said it will support seven start-up companies in its third annual "Telia Startup" scheme. They are Asistobe, Nordiq Products, Leid.no, Aivero, Rensikt, OnsiteViewer and Zygizo.

Asistobe has developed a platform to optimise urban public transport using passenger count and ticket systems. Nordiq Products has developed sensor for medical monitoring, including "LiSa, the Life Saver" to monitor breathing and heart rates, oxygen saturation and temperature. Leid.no provides a platform to make it easier to lease equipment where this is more advantageous than buying it, such as DIY and gardening kit as well as vehicles.

TD

Aivero has developed a simple, cloud-based platform to set up and operate robot cells, using live 3D video and AI. Rensikt has developed a way to clean a directly car using washer fluid, without the use of disposable plastic containers.

OnSiteViewer provides a way to build using photorealistic augmented reality (AR) to support urban planning. Users can utilise their own mobile phone or AR goggles as a "digital time travel machine" at a building site to see what proposals will look like as finished buildings.

Zygizo develops sensors to measure snowfall, with applications for calculating snow load on the roof of a cabin or for hydropower plants.

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS ccat : Corporate/Industrial News | c23 : Research/Development | centrp : Entrepreneurs/Startups | csmlbs : Small/Medium Businesses | ncat : Content Types | nfact : Factiva Filters | nfcpex : C&E Executive News Filter

RE eurz: Europe | norw: Norway | nordz: Nordic Countries | scandz: Scandinavia

PUB Telecompaper BV

AN Document TELEUR0020220307ei37000e0



HD Telia extends a helping hand to Ukrainian businesses moving to Lithuania

BY Irma Jančiauskaitė

WC 536 wordsPD 2 March 2022

SN Lithuanian News Agency - ELTA

SC ELTA

LA English

CY (c) 2022 Lithuanian News Agency - ELTA

LP

Vilnius, March 2 (ELTA) – With the rapid growth in number of Ukrainian businesses considering or preparing to relocate to Lithuania, Telia Lietuva, the country's largest telecommunications and IT services company in Lithuania, has prepared a special support package. It will be available to all Ukrainian companies relocating to Lithuania, reports Lithuania.

As of today, Telia Lietuva will exempt Ukrainian businesses from installation, activation and administrative fees for all of its provided telecommunications services, including broadband Internet, voice telephony and mobile connection. Also, Ukrainian businesses moving to Lithuania will be exempt from the monthly mobile connection, mobile Internet, Microsoft 365 service bundle, Telia Cloud and call centre service fees for up to half a year.

TD

Depending on the need of Ukrainian businesses to communicate with their partners in Ukraine and other countries, Telia Lietuva will offer a possibility to pay for international calls at wholesale prices for up to 6 months. The company will also advise on IT infrastructure relocation issues.

"Not only civilians, but also businesses are fleeing the war in Ukraine. Being able to stay safe and to continue operating uninterruptedly is crucial for technology-related companies, but relocating staff, equipment and services comes at a huge and unforecast cost. Contributing to the invitation to Ukrainian businesses to continue their operations from Lithuania, we decided to render them with free installation and provision of the most important communication and IT services for up to half a year," says Daniel Karpovič, Head of Enterprise at Telia Lietuva.

The centre for relocation and integration of foreigners International House Vilnius, which provides the most important services related to work, relocation and integration to foreigners, who work in or come to Lithuania, and their families, has been increasing its capacities as from last week, and activated the hotline funded by Telia Lietuva.

"It is obvious that many Ukrainian business organizations will choose to work in Lithuania, because we had received inquiries about the possibility of relocating companies, their employees and family members even before the onset of the war. These days, our hotline consultants had to often answer the question how to reach Lithuania more safely, especially in the first days of the war, when our hotline was one of the first ones to provide information to refugees. We believe that in the next two weeks, we will already be able to devote all our efforts to helping people of Ukraine to settle in Vilnius and move their businesses here as smoothly as possible," says Inga Romanovskienė, head of the Vilnius City Tourism and Business Development Agency Go Vilnius.

"We are ready to help with any issues related to communication or technology services, giving priority to support and activation of services for Ukrainian businesses in Lithuania," Karpovič adds.

Telia Lietuva has also contributed to assistance provided to Ukrainian war refugees arriving to our country – the company will distribute an unlimited number of prepaid Ežys SIM cards with communication services. Ežys customers, just like all Telia Lietuva mobile and fixed telephony subscribers, can make free and unlimited calls and send SMS to Ukraine in March, and people in Ukraine can communicate with Lithuania or inside Ukraine.

CO Itvcom: Telia Lietuva AB | televk: Telia Company AB

- **IN** i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services
- NS ccat : Corporate/Industrial News | coffs : Production/Services Relocation | c02 : Corporate Changes
- RE lith: Lithuania | ukrn: Ukraine | vilniu: Vilnius | baltst: Baltic States | dvpcoz: Developing Economies | eecz: European Union Countries | eeurz: Central/Eastern Europe | eurz: Europe
- PUB Lithuanian News Agency ELTA
- AN Document ELTA000020220302ei3200231



HD Telia Lithuania supports Ukrainian businesses moving to Lithuania

WC 87 words

PD 2 March 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Lithuania has introduced a special support package for Ukrainian companies moving their activities to Lithuania. The operator is waiving activation, administration and implementation payments, and the business will be able to use mobile telephony, mobile internet, the Microsoft 365 package, **cloud** and call centre services free for six months.

Based on demand, Telia Lithuania may offer free international calls at wholesale rates for up to six months. The companies will also be offered consulting on moving IT infrastructure.

co televk : Telia Company AB

IN i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless

Telecommunications Services

NS ccat : Corporate/Industrial News | c22 : New Products/Services | cexpro : Products/Services | ncat :

Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE lith: Lithuania | eurz: Europe | baltst: Baltic States | eecz: European Union Countries | eeurz:

Central/Eastern Europe

PUB Telecompaper BV

AN Document TELEUR0020220302ei320008h



HD MWC 2022: Connectivity unleashed as MWC22 Barcelona opens for business

BY CT Bureau

CR Distributed by Contify.com

WC 1,118 wordsPD 1 March 2022

SN Communications Today

SC ATCOMT

LA English

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LP

The world's largest and most influential **connectivity** event opens its doors today at the Fira Gran Via in Barcelona. MWC22 Barcelona will build on the success of last year, reflecting on a new era of **connectivity** and collaboration across the mobile industry.

Communications Today is the India-media partner for the event.

TD

This week at MWC22 Barcelona will see many exciting announcements, including an automotive launch, with Fisker's unveiling of the new all-electric Ocean SUV. Monday's speaker line-up also delivers compelling keynotes from AT&T, China Mobile, China Telecom, China Unicom, Millicom, Telstra, Telefonica, Telia Company and Vodafone.

Opening MWC22 Barcelona with a keynote address, Mats Granryd, Director General of GSMA, said: "We are delighted to see vibrancy return to Barcelona this year as we convene, collaborate and do business. This edition of MWC provides a collective opportunity to showcase how the digital ecosystem transforms lives and supports global recovery through the power of mobile technology."

This year's theme, Connectivity Unleashed, showcases the power of mobile technology in our everyday lives and explores the ground-breaking technologies that will shape industry and society. Connectivity is now intelligently transforming industries as the world moves from simple connectivity to meaningful connectivity. With exceptional speakers lined up, exciting product launches, the launch of the GSMA's Global Mobile Economy Report 2022, and the all-new Industry City.

"The doors are now open! Our attendees will experience more than 1500 exhibitors and have access to more than 1000 speakers, plus entrepreneurs, rebels, and people doing the extraordinary," said John Hoffman, CEO GSMA Ltd. "We are on a journey to digital everything, and MWC22 is the place to be to experience what that means."

For the first time at MWC, live universal sign language interpretation (SLI) will be provided at all keynotes, Diversity4Tech sessions, and the Mobile for Development (M4D) session 'Reaching Underserved Population Segments' at 4YFN (Four Years From Now), the GSMA's leading start-up and innovation event. The SLI will be provided in person by partner DeafTawk. The interpretation has been made possible by funding DeafTawk secured from the UK Foreign, Commonwealth & Development Office (FCDO) and GSMA Innovation Fund for Assistive Tech.

Global Mobile Economy Report 2022 confirms continued 5G momentum Launching today, the annual Global Mobile Economy Report reveals continued momentum in 5G adoption, with the total number of 5G connections expected to reach 1 billion in 2022, as usage grows rapidly in pioneer markets.

The report highlights the mobile industry's instrumental role in extending connectivity to people worldwide. In the last decade, network infrastructure investment by operators shrunk the coverage gap from a third of the global population to just 6%, but there is more to be done.

The adoption of mobile internet services has not kept pace with the expansion of network coverage. Despite living within the footprint of a mobile broadband network, 3.2 billion people, or 41% of the global population, are not using the mobile internet. The reasons for this usage gap vary by region and include lack of affordability and skills. These barriers to mobile internet adoption impact the most vulnerable

segments of the population, including women, the elderly, people in rural areas, and persons with disabilities.

Other key findings include:

- * By the end of 2025, 5G will account for around a quarter of total mobile connections, and more than two in five people worldwide will live within reach of a 5G network.
- * In 2021, mobile technologies and services generated \$4.5 trillion of economic value, equating to 5% of global GDP. The report predicts that this will grow to \$5 trillion in 2025.
- * As 5G adoption accelerates in leading markets such as China, South Korea, and the US, 4G begins to decline. Globally, 4G adoption will account for 55% of total connections by 2025, down from a peak of 58% in 2021
- * But 4G still has room to grow in most developing markets. For example, in Sub-Saharan Africa, 4G adoption is below a fifth of total connections.
- * 5.3% billion people subscribed to mobile services, representing 67% of the global population, by the end of 2021.
- * In a growing number of markets, most adults now own a mobile phone, meaning that future growth will come from younger populations taking out a mobile subscription for the first time.

The report also highlights the vital role that mobile technology will play in accelerating progress on the Sustainable Development Goals (SDGs) ahead of the UN's deadline in 2030. These include increasing access to education, healthcare and addressing poverty and inequality. Additionally, the report outlines a set of policy recommendations for achieving a resilient post-pandemic recovery. This involves investing in digital skills training, utilising public funds for connectivity, adopting a balanced approach to collecting revenues through taxes and fees in the mobile sector, and prioritising digital transformation in government services.

The GSMA Ministerial Programme is back

The GSMA Ministerial Programme welcomes more than 160 international delegations participating in this year's discussions to support the SDGs and other critical issues. Senior policymakers, regulators, industry leaders and government officials will discuss closing the digital gap, meeting global climate targets, building policies for a digital world, and maximising the potential of 5G.

Accelerating industry collaboration and 5G transformation

Industry City has opened its doors for the first time. Co-delivered with Knowledge Partner, Accenture the exhibit showcases demos from the FinTech, Manufacturing, and Automotive sectors. It also hosts a range of Summits covering robotics and smart mobility topics.

Visitors to Industry City can also explore the GSMA Pavilion and the GSMA Foundry Forge, the go-to place for cross-industry collaboration and positive change. At the GSMA Foundry, attendees can see demos and learn about the latest projects, including an autonomous drone flight powered by Al and live-streamed over a 5G network.

Addressing societal issues

Championing greater diversity in the technology industry, the Diversity4Tech Summit also kicked off today and includes talks, panels, awards, and a roundtable to accelerate transformation and inclusion – inspiring attendees to demonstrate leadership on the issue.

MWC22 Barcelona will, for the seventh year in a row, be a carbon-neutral event again – certified by AENOR International. Mobile was the first industry to commit to achieving net-zero by 2050, and GSMA's commitment extends to MWC22 Barcelona.

Tomorrow's programme includes keynote sessions featuring Adam Selipsky, CEO, Amazon Web Services; Shuky Sheffer, President & CEO, Amdocs; Hon. Ms. Jessica Rosenworcel, Chairwoman, FCC; Guo Ping, Rotating Chairman, Huawei; Cher Wang, Chairperson & CEO, HTC; Cristiano Amon, President & CEO, Qualcomm; Pekka Lundmark, President & CEO, Nokia; and Prem Akkaraju, CEO, Weta Digital

co televk : Telia Company AB

- **IN** i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services
- NS ccat: Corporate/Industrial News
- RE barca : Barcelona | catal : Catalonia | eecz : European Union Countries | eurz : Europe | medz : Mediterranean | spain : Spain | weurz : Western Europe
- PUB ADI Media Pvt. Ltd.
- AN Document ATCOMT0020220301ei310002v

HD AddLife completes Telia Health Monitoring acquisition

WC 129 words

PD 1 March 2022

SN M2 Pharma

SC MTEU

LA English

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LP

Life science company AddLife AB (STO:ALIF-B) has completed its acquisition of Telia Health Monitoring, the company confirmed on Tuesday.

Telia Health Monitoring offers a digital **platform** solution that enables self-monitoring by patients with chronic diseases such as heart disease, hypertension, chronic obstructive pulmonary disease (COPD), diabetes and inflammatory bowel disease (IBD). It has annual sales of approximately SEK4m.

TD

The business will be integrated into AddLife's Camanio unit and become part of the business area Medtech.

According to AddLife, by combining Camanio's digital care platform with the Telia Health Monitoring solution there are opportunities to support care providers in the development of digital care.

(EUR1=SEK10.68)

((Comments on this story may be sent to info@m2.com))

co akdlif : AddLife AB | televk : Telia Company AB

IN i372 : Medical Equipment/Supplies | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | i951 : Healthcare/Life Sciences | iphmed : Medical Devices/Apparatus

NS cacqu : Acquisitions/Mergers | c181 : Acquisitions/Mergers/Shareholdings | c18 : Ownership Changes | cactio : Corporate Actions | ccat : Corporate/Industrial News | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

PUB Normans Media Ltd

AN Document MTEU000020220301ei31001e1

HD AddLife completes Telia Health Monitoring acquisition

WC 124 words

PD 1 March 2022

SN FinancialWire

SC FNWIR

LA English

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LP

Life science company AddLife AB (STO:ALIF-B) has completed its acquisition of Telia Health Monitoring, the company confirmed on Tuesday.

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(EUR1=SEK10.68)

((Distributed by M2 Communications www.m2.com))

co akdlif : AddLife AB | televk : Telia Company AB

IN i372 : Medical Equipment/Supplies | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | i951 : Healthcare/Life Sciences | iphmed : Medical Devices/Apparatus

NS cacqu : Acquisitions/Mergers | c181 : Acquisitions/Mergers/Shareholdings | c18 : Ownership Changes | cactio : Corporate Actions | ccat : Corporate/Industrial News | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

PUB Normans Media Ltd

AN Document FNWIR00020220301ei31003h1



HD Deutsche Telekom partners Everphone to offer management device service

WC 123 wordsPD 1 March 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Deutsche Telekom is partnering with Everphone to offer business customers a management service for **devices**. The service rents out, maintains, repairs and replaces mobile **devices**. Business customers can return their **devices** at the end of the leasing period for refurbishment.

Telekom has been active in the market for second hand **devices** in cooperation with Teqcycle, a specialist trade-in company. The partners have been offering to buy business customers' used smartphones and tablets, extending the lifecycle of the **devices**. Over the past three years, more than 80,000 **devices** with the #GreenMagenta label have been collected back from business customers. Telekom also launched the <u>Eco Rating</u> initiative last year with Orange, Telefonica, Telia Company and Vodafone.

co televk : Telia Company AB | dbptel : Deutsche Telekom AG

IN i7902 : Telecommunication Services | i7902202 : Mobile Telecommunications | i79022 : Wireless

Telecommunications Services

NS cpartn : Partnerships/Collaborations | ccat : Corporate/Industrial News

RE eurz : Europe

PUB Telecompaper BV

AN Document TELEUR0020220301ei310002u

HD Ekobot AB (publ) publishes Q4 year-end report 2021

WC 983 words

PD 1 March 2022

SN MFN

SC MFNEN

LA English

CY Copyright 2022. Modular Finance AB

LP

The fourth quarter of 2021 was marked by a spirit of the future. During the end of the quarter, several important milestones were reached. During the fourth quarter, Ekobot entered a very important strategic cooperation project. In December, it became clear that Ekobot could begin an integration with Saga Robotics' robot **platform** Thorwald. The collaboration is very well in line with the company's strategic goals for **hardware** development of Ekobot's robot system.

Financial information

TD

October - December 2021

Figures in parentheses refer to the corresponding period for the previous year.

- * Net sales during the period totaled SEK 0 thousand (0).
- * Net earnings for the period totaled SEK -1,508 thousand (-1,906).
- * Earnings per share before dilution totaled SEK -0.64 (-1.55).
- * Total assets at the end of the period totaled SEK 26,826 thousand (8,916).
- * Cash and cash equivalents at the end of the period totaled SEK 9,004 thousand (1,274).

January - December 2021

Figures in parentheses refer to the corresponding period for the previous year.

- * Net sales during the period totaled SEK 0 thousand (0).
- * Net earnings for the period totaled SEK -7,067 thousand (-3,964).
- * Earnings per share before dilution totaled SEK -3.24 (-10.27).
- * Total assets at the end of the period totaled SEK 26,826 thousand (8,916).
- * Cash and cash equivalents at the end of the period totaled SEK 9,004 thousand (1,274).

Significant events

January - December 2021

- * Almi Corporate partner Mälardalen AB showed confidence in the company and granted a SEK 2.6 million loan.
- * On March 15, the company was introduced on the Nasdaq First North Growth Market and also carried out a new share issue that will bring in SEK 20.5 million to the company before issue expenses.
- * The company was a finalist in the Agtech Challenge innovation contest and was granted market development support by the Swedish Board of Agriculture.
- * The company receives EU support and forms part of a collaborative project with Europe's leading agricultural technology university, Wageningen University Research.

- * Erik Jonuks (formally deputy CEO) took over as CEO on April 15 when Ulf Nordbeck announced his decision to step down from his post. Ulf will maintain his commitment to the company as a shareholder and board member.
- * Tomas Täuber was appointed new Technical Manager, also on April 15. Tomas is an experienced leader with a solid technical background.
- * At the end of May, the company and Scanfil in Åtvidaberg began a collaboration aimed at initiating an industrialization process for their robotic platform, Ekobot Gen III.
- * The company and Telia have begun a collaboration to create a powerful solution for efficient precision farming. The solution is based on connection to Telia's 5G network.
- * In June, the company submitted a patent application to the European Patent and Registration Office for a cutting, linear weed control system.
- * Victoria Woyland was elected to the Board on June 30. Victoria is a great asset to Ekobot's board, as she has a broad background in areas such as aftermarket, business development, IT and digital service development.
- * In September, the company took its first important step toward exporting to the European market by conducting a number of highly successful field tests in the Netherlands.
- * On October 7, in fierce competition with Sweden's top agricultural innovations, the company won first prize in the Hushållningssällskapet (Rural Economy and Agricultural Societies) innovation contest, Agtech Challenge 2021.
- * On November 1, together with Wageningen University and Research, the company published promising field test results. The test results show very rapid and promising development of the robot system's effectiveness.
- * In December, the company will initiate an integration with the Saga Robotics Thorvald robot platform with the aim of accelerating its market introduction in 2022.
- * The company is beginning a collaboration with the Pinpoint Estimates platform to capture broader market expectations. Pinpoint is an open-source platform that compiles market expectations in the run-up to listed companies' full year and quarterly reports.
- * Almi Mälardalen AB has granted Ekobot AB (publ) a green loan of around SEK 1.9 million. Almi's green loans are aimed at financing green investments that pursue one or more of the six environmental objectives in the EU's taxonomy.
- * REGION VÄSTMANLAND has granted the company support to a maximum of SEK 313,550 for the engagement of consultancy services. The subsidy may total 50% of the approved support base.
- * The company received positive advance notification regarding support from the Swedish Board of Agriculture. The support is aimed at allowing the company to conduct large-scale field tests and to begin collecting field data during the 2022 growing season. The final amount has not yet been determined, but an indication would be in the region of SEK 4.5 to 5.9 million.

Significant events after the end of the period

- * The company files a new patent application for its tool system in February.
- * The company signs letters of intent with three customers in the Netherlands.

Contacts

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About Ekobot

Ekobot AB (publ), based in Västerås, conducts business based on the business concept of developing, manufacturing and selling autonomous agricultural robots that enable efficient precision cultivation where weed management takes place completely without or with minimal use of herbicides. The company's vision is to provide the agricultural sector with a long-term sustainable alternative for reducing or completely eliminating chemical spraying in crops of crops for human consumption. The company is listed on the Nasdaq First North Growth Market.

For more information, see Ekobot's website www.ekobot.se

Augment Partners AB, tel. +46 8 604 22 55, e-mail: info@augment.se is the Company's Certified Adviser.

Attachments

Rapport Q4 2021 Ekobot Eng

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CO fdlbsg: Ekobot AB | televk: Telia Company AB

IN i32 : Machinery | i321 : Agricultural Machinery | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | iindustrial Goods

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PUB Modular Finance

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HD Connectivity Unleashed as MWC22 Barcelona Opens for Business; Day one sees innovative launches, inspiring speakers, sign language interpretation and insights from the GSMA's Mobile Economy Report

CR GSMA; PR Newswire

WC 1,311 words

PD 1 March 2022

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ΙP

BARCELONA, Spain, March 1, 2022 /PRNewswire/ -- The world's largest and most influential connectivity event opens its doors today at the Fira Gran Via in Barcelona. MWC22 Barcelona will build on the success of last year, reflecting on a new era of connectivity and collaboration across the mobile industry.

https://mma.prnewswire.com/media/1755585/GSMA.jpg

TD

This week at MWC22 Barcelona will see many exciting announcements, including an automotive launch, with Fisker's unveiling of the new all-electric Ocean SUV. Monday's speaker line-up also delivers compelling keynotes from AT&T, China Mobile, China Telecom, China Unicom, Millicom, Telstra, Telefonica, Telia Company and Vodafone.

Opening MWC22 Barcelona with a keynote address, Mats Granryd, Director General of GSMA, said: "We are delighted to see vibrancy return to Barcelona this year as we convene, collaborate and do business. This edition of MWC provides a collective opportunity to showcase how the digital ecosystem transforms lives and supports global recovery through the power of mobile technology."

This year's theme, Connectivity Unleashed, showcases the power of mobile technology in our everyday lives and explores the ground-breaking technologies that will shape industry and society. Connectivity is now intelligently transforming industries as the world moves from simple connectivity to meaningful connectivity. With exceptional speakers lined up, exciting product launches, the launch of the GSMA's Global Mobile Economy Report 2022, and the all-new Industry City.

"The doors are now open! Our attendees will experience more than 1500 exhibitors and have access to more than 1000 speakers, plus entrepreneurs, rebels, and people doing the extraordinary," said John Hoffman, CEO GSMA Ltd. "We are on a journey to digital everything, and MWC22 is the place to be to experience what that means."

For the first time at MWC, live universal sign language interpretation (SLI) will be provided at all keynotes, Diversity4Tech sessions, and the Mobile for Development (M4D) session 'Reaching Underserved Population Segments' at 4YFN (Four Years From Now), the GSMA's leading start-up and innovation event. The SLI will be provided in person by partner DeafTawk. The interpretation has been made possible by funding DeafTawk secured from the UK Foreign, Commonwealth & Development Office (FCDO) and GSMA Innovation Fund for Assistive Tech.

Global Mobile Economy Report 2022 confirms continued 5G momentum

Launching today, the annual Global Mobile Economy Report reveals continued momentum in 5G adoption, with the total number of 5G connections expected to reach 1 billion in 2022, as usage grows rapidly in pioneer markets.

The report highlights the mobile industry's instrumental role in extending connectivity to people worldwide. In the last decade, network infrastructure investment by operators shrunk the coverage gap from a third of the global population to just 6%, but there is more to be done.

The adoption of mobile internet services has not kept pace with the expansion of network coverage. Despite living within the footprint of a mobile broadband network, 3.2 billion people, or 41% of the global

population, are not using the mobile internet. The reasons for this usage gap vary by region and include lack of affordability and skills. These barriers to mobile internet adoption impact the most vulnerable segments of the population, including women, the elderly, people in rural areas, and persons with disabilities.

Other key findings include:

*By the end of 2025, 5G will account for around a quarter of total mobile connections, and more than two in five people worldwide will live within reach of a 5G network.

*In 2021, mobile technologies and services generated \$4.5 trillion of economic value, equating to 5% of global GDP. The report predicts that this will grow to \$5 trillion in 2025.

*As 5G adoption accelerates in leading markets such as China, South Korea, and the US, 4G begins to decline. Globally, 4G adoption will account for 55% of total connections by 2025, down from a peak of 58% in 2021.

*But 4G still has room to grow in most developing markets. For example, in Sub-Saharan Africa, 4G adoption is below a fifth of total connections.

*5.3% billion people subscribed to mobile services, representing 67% of the global population, by the end of 2021.

*In a growing number of markets, most adults now own a mobile phone, meaning that future growth will come from younger populations taking out a mobile subscription for the first time.

The report also highlights the vital role that mobile technology will play in accelerating progress on the Sustainable Development Goals (SDGs) ahead of the UN's deadline in 2030. These include increasing access to education, healthcare and addressing poverty and inequality. Additionally, the report outlines a set of policy recommendations for achieving a resilient post-pandemic recovery. This involves investing in digital skills training, utilising public funds for connectivity, adopting a balanced approach to collecting revenues through taxes and fees in the mobile sector, and prioritising digital transformation in government services.

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Tomorrow's programme includes keynote sessions featuring Adam Selipsky, CEO, Amazon Web Services; Shuky Sheffer, President & CEO, Amdocs; Hon. Ms. Jessica Rosenworcel, Chairwoman, FCC; Guo Ping, Rotating Chairman, Huawei; Cher Wang, Chairperson & CEO, HTC; Cristiano Amon, President & CEO, Qualcomm; Pekka Lundmark, President & CEO, Nokia; and Prem Akkaraju, CEO, Weta Digital.

Register for MWC22 Barcelona here.

About GSMA

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry, and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

We invite you to find out more at gsma.com.

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CT Nick Miles, nmiles@gsma.com +44 7816 129959

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RE spain : Spain | catal : Catalonia | barca : Barcelona | eecz : European Union Countries | eurz : Europe | medz : Mediterranean | weurz : Western Europe

IPD -

IPC CPR

PUB PR Newswire Association, Inc.

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HD MWC 2022: Nokia, Cellcom, Telia deploy 5G edge slicing solution

BY CT Bureau

CR Distributed by Contify.com

WC 999 words

PD 28 February 2022

SN Communications Today

SC ATCOMT

LA English

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LP

Nokia announced the world's first deployment of 5G Edge Slicing on a live commercial network with mobile operators, Cellcom and Telia. Nokia's innovative Edge Slicing solution allows operators to offer their enterprise customers next-generation, secure, reliable, and high-performing Virtual Private Network (VPN) services over commercial 4G and 5G networks. Once launched, both companies will be able to offer new services to their customers – driving new revenue opportunities – as well as partner with **cloud** application and infrastructure service providers. Nokia's solution is available now for its global customer base.

TD

Nokia and Cellcom's trial with sliced RAN-Transport-Core is taking place in Netanya, Israel, and is focused on business applications and the customer experience as well as enterprise interconnectivity over a high-speed metro network. Nokia and Telia are running a live trial in Tampere, Finland together with high-tech global engineering group, Sandvik. The trial demonstrates how next-generation 5G Edge Slicing functions can operate with different mining equipment and digital applications

Nokia's 5G Edge Slicing solution is an evolution of Nokia's previously announced 4G/5G slicing capability. It enables operators to keep critical business data traffic local while running slice management, control, and assurance on existing central mobile data centers ensuring cost and operational efficiency. It is also scalable and the same virtualized network infrastructure can be used by several customers in the same area, for example in a business campus containing multiple companies. Based on an enterprise customer's needs, a 5G virtual private network can be flexibly deployed in an area with a 4G/5G base station or in a campus, city, or regional area. With Nokia, CSPs can now offer their customers both on-premise 5G Private Networks or 5G Virtual Private Networks.

Joe Madden, principal analyst at Mobile Experts said: "Network Slicing is the most exciting aspect of 5G, as it raises the possibility of new dimensions of 'higher performance', and enhanced ARPU from both consumers and enterprise customers. While many providers are focusing on deploying 5G private networks for enterprises, network slicing also opens up new market opportunities for operators with 5G Virtual Private Networks by keeping enterprise traffic local with Edge Slicing using the existing 4G/5G network."

Yaniv Koriat, CTO and VP Engineering at Cellcom Israel said: "Cellcom is one of the largest telecommunication groups in Israel and we have worked closely with Nokia for a long time. Their new 5G Edge Slicing solution allows Cellcom to differentiate itself in the market with innovative enterprise solutions. It also enables us to develop new opportunities with Cloud Application Service providers."

Jari Collin, CTO, Telia Finland, said: "We are delighted to be the first to deploy the first-ever 5G Edge Slicing solution together with Nokia and our important customer Sandvik, who is investing heavily in digital mining technologies and the technology environment in its test mine in Tampere. Our advanced 5G network supports our customers' business by enabling new kinds of services and making the network more efficient. We will continue to develop innovations and the latest applications, as our mission is to bring the opportunities of 5G to our customers."

Tommi Uitto, President of Mobile Networks at Nokia, said: "Nokia was the first vendor to offer a network slicing solution and we are proud to continue this pioneering story by being the first to offer 5G Edge Slicing to our customers. These successful trials cover different use cases and customer requirements

and demonstrate the possibilities of network slicing. I look forward to seeing this important new area grow and deliver opportunities to our customers in the coming year."

Cloud service and infrastructure provider opportunity

A distributed and sliced 5G edge architecture creates partnering opportunities for mobile operators and Cloud Service and Infrastructure Providers. High-performing virtualized networks enable service providers to bring edge cloud application platforms close to enterprise customers. Co-location and infrastructure companies' facilities can be also utilized in the edge slicing deployments. 5G Edge Slicing combined with Nokia's new Adaptive Cloud Networking solution, which part of its scope is automating the edge cloud network, opens additional opportunities for service providers to create value for enterprises.

Nokia's 5G network slicing solution supports all LTE, 5G non-standalone, and 5G standalone (SA) devices, enabling mobile operators to utilize a huge device ecosystem and address a large customer base. This allows operators to utilize existing 4G/5G network assets, spectrum, and coverage for next-generation VPN services. Nokia's network slicing solution is based on 3GPP, IETF, and TMForum standards and architecture and works in multi-vendor environments.

Nokia launches new automated RAN management solution for Edge Slicing

Nokia has also announced the launch of a new automated RAN slice management solution which allows operators to select, deploy and manage slices across multiple RAN sites based on their customers' requirements. The new solution, which supports the management of LTE, 5G NSA and 5G SA RAN slices, consists of service quality, resource partitioning, RAN traffic isolation, and engineering as well as per slice security management functionalities. By collecting Key Performance Indicators from 4G/5G base stations operators can assure network slicing service levels to their enterprise customers. RAN slice automation has APIs to Nokia's Digital Operations software enabling end-to-end orchestration and assurance.

Experience 5G Edge Slicing live at MWC22 Barcelona

Nokia is showcasing its 5G Edge Slicing solution on a live network at MWC 2022 in Barcelona. Nokia was first to demonstrate 4G/5G network slicing across RAN-Transport-Core with management and assurance. A number of trials have already taken place with Nokia's global customer base including deployments of new slicing capabilities such as 5G standalone network slicing, Fixed Wireless Access slicing, slicing in 5G private networks as well as slice management automation and orchestration. At MWC22, Nokia will also demonstrate 5G dynamic slice selection in a live network for enterprise applications.

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HD Estonia: Telia suspends transmission of several Russian-language TV channels

WC 295 words

PD 28 February 2022

ET 16:20

SN Baltic Daily - Political/Social News

SC BALPOLE

LA English

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LP

TALLINN, Feb 28, BNS – Cable and telecom provider Telia Estonia has suspended the transmission of a number of Russian-language TV channels to customers of its TV service from Monday.

Telia said in a press release that a number of new international sanctions have been imposed in the wake of the Russian attack on Ukraine. All Estonian television service providers must suspend the transmission of television channels in connection with which there is a violation of the sanctions or a suspicion of violation of the sanctions. A memorandum to this effect was sent to all TV service providers by the Financial Intelligence Unit.

TD

Due to the above, and on the basis of the International Sanctions Act, Telia has suspended the transmission of the following TV channels to Telia TV service customers as of Feb 28: PBK, CTC Media (STS), REN TV, Дом кино, Дом кино Премиум, Музыка Первого, Тремо, Врем, Поехали!, Карусель.

Based on a decision of the Consumer Protection and Technical Regulatory Authority, the transmission of the TV channels RTR Planeta, NTV Mir, Rossia 24 and TV Centre International (TVCI) has already been suspended everywhere in Estonia.

Kristjan Viilmann, head of the private customer unit at Telia Estonia, said now that a number of TV channels have been suspended to comply with legal requirements, from March 1, Telia will offer all its TV service customers a two-month free subscription to a news channel package that allows them, among other things, to follow international media coverage of events in Ukraine.

The package includes the television channels CNN International, France 24, BBC World, Deutsche Welle, CNBC Europe, Al Jazeera, Bloomberg TV, Euronews.

Tallinn newsroom, +372 610 8852, sise@bns.ee

Baltic News Service

co storty: CTC Media Inc | televk: Telia Company AB

i9741109 : Cable Broadcasting | i97411 : Broadcasting | imed : Media/Entertainment | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | i9741102 : Television Broadcasting

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The adoption of mobile internet services has not kept pace with the expansion of network coverage. Despite living within the footprint of a mobile broadband network, 3.2 billion people, or 41% of the global population, are not using the mobile internet. The reasons for this usage gap vary by region and include lack of affordability and skills. These barriers to mobile internet adoption impact the most vulnerable

segments of the population, including women, the elderly, people in rural areas, and persons with disabilities.

Other key findings include:

- By the end of 2025, 5G will account for around a quarter of total mobile connections, and more than two in five people worldwide will live within reach of a 5G network. - In 2021, mobile technologies and services generated \$4.5 trillion of economic value, equating to 5% of global GDP. The report predicts that this will grow to \$5 trillion in 2025. - As 5G adoption accelerates in leading markets such as China, South Korea, and the US, 4G begins to decline. Globally, 4G adoption will account for 55% of total connections by 2025, down from a peak of 58% in 2021. - But 4G still has room to grow in most developing markets. For example, in Sub-Saharan Africa, 4G adoption is below a fifth of total connections. - 5.3% billion people subscribed to mobile services, representing 67% of the global population, by the end of 2021. - In a growing number of markets, most adults now own a mobile phone, meaning that future growth will come from younger populations taking out a mobile subscription for the first time.

The report also highlights the vital role that mobile technology will play in accelerating progress on the Sustainable Development Goals (SDGs) ahead of the UN's deadline in 2030. These include increasing access to education, healthcare and addressing poverty and inequality. Additionally, the report outlines a set of policy recommendations for achieving a resilient post-pandemic recovery. This involves investing in digital skills training, utilising public funds for connectivity, adopting a balanced approach to collecting revenues through taxes and fees in the mobile sector, and prioritising digital transformation in government services.

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AN Document OTSDE00020220228ei2s0002t



HD Connectivity Unleashed as MWC22 Barcelona Opens for Business

CR GSMA; PR Newswire

WC 1,312 words

PD 28 February 2022

ET 15:06

SN PR Newswire Europe

SC TWOTEN

LA English

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LP

Day one sees innovative launches, inspiring speakers, sign language interpretation and insights from the GSMA's Mobile Economy Report

BARCELONA, Spain, Feb. 28, 2022 /PRNewswire/ -- The world's largest and most influential **connectivity** event opens its doors today at the Fira Gran Via in Barcelona. MWC22 Barcelona will build on the success of last year, reflecting on a new era of **connectivity** and collaboration across the mobile industry.

TD

This week at MWC22 Barcelona will see many exciting announcements, including an automotive launch, with Fisker's unveiling of the new all-electric Ocean SUV. Monday's speaker line-up also delivers compelling keynotes from AT&T, China Mobile, China Telecom, China Unicom, Millicom, Telstra, Telefonica, Telia Company and Vodafone.

Opening MWC22 Barcelona with a keynote address, Mats Granryd, Director General of GSMA, said: "We are delighted to see vibrancy return to Barcelona this year as we convene, collaborate and do business. This edition of MWC provides a collective opportunity to showcase how the digital ecosystem transforms lives and supports global recovery through the power of mobile technology."

This year's theme, Connectivity Unleashed, showcases the power of mobile technology in our everyday lives and explores the ground-breaking technologies that will shape industry and society. Connectivity is now intelligently transforming industries as the world moves from simple connectivity to meaningful connectivity. With exceptional speakers lined up, exciting product launches, the launch of the GSMA's Global Mobile Economy Report 2022, and the all-new Industry City.

"The doors are now open! Our attendees will experience more than 1500 exhibitors and have access to more than 1000 speakers, plus entrepreneurs, rebels, and people doing the extraordinary," said John Hoffman, CEO GSMA Ltd. "We are on a journey to digital everything, and MWC22 is the place to be to experience what that means."

For the first time at MWC, live universal sign language interpretation (SLI) will be provided at all keynotes, Diversity4Tech sessions, and the Mobile for Development (M4D) session 'Reaching Underserved Population Segments' at 4YFN (Four Years From Now), the GSMA's leading start-up and innovation event. The SLI will be provided in person by partner DeafTawk. The interpretation has been made possible by funding DeafTawk secured from the UK Foreign, Commonwealth & Development Office (FCDO) and GSMA Innovation Fund for Assistive Tech.

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IPD GSMA-MWC22

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CR GSMA: Canada NewsWire

WC 1,363 words

PD 28 February 2022

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SN Canada NewsWire

SC CNNW

LA English

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LP

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AN Document CNNW000020220228ei2s004jx



HD Telia Norway says linear TV still accounts for more viewing time overall than VoD

WC 430 words

PD 28 February 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Norway has published a report called <u>"The Battle for TV viewers"</u> which shows that Video on Demand is increasingly popular, but linear television accounts for more viewing time overall. The report uses data retrieved via the TV and its streaming service Telia Play for accurate information about customers' viewing habits.

The proportion of subscribers using OTT services went up by 46 percent last year, said Daniel Sorheim, television manager at Telia. Sorheim said viewers like to channel-hop TV on a Friday night but also like watching their favourite HBO Max series on Saturday evenings.

TD

Telia currently has 477,000 TV customers and the number is still growing. In 2021 alone, the number increased by 8,000. Around 95 percent of its customers watch linear TV during any given month, driven by news and sports in particular, while almost 80 percent use VoD, said Sorheim. He added that customers appreciate the selection menu, use of which rose by almost 30 percent between 2020 and 2021. Streaming services such as HBO and Viaplay are the most popular options.

The TV report shows that the weekend, Monday and Tuesday are popular days for watching TV, and prime time is from 20:00 hrs to 23:00 hrs. Both linear TV and VoD are important for customers all weekend, but Sunday to Tuesday show a clear peak for streaming services such as HBO, Viasat and Paramount +. This is probably related to the release of new episodes from popular serials, SOrheim said.

Popular feature film rentals include children's movies such as "Raya and the Last Dragon" and the "Paw Patrol" film, often watched at 07:00 hrs on Sunday mornings.

In collaboration with Kantar, Telia has also conducted a population survey related to the TV report, which shows among other things that Norwegians over the age of 60 enjoy entertainment programmes on Friday nights, while films and serials are clear winners for those under the age of 45.

Those over 60 are more impatient than those under 30 when it comes to TV content. Nearly 50 percent of those over 60 give up after a few minutes if they do not find the show engaging, said Sorheim. At the same time, people under 30 years old are more selective, and few who just turn on the TV set and watch,

Telia Norway added that as many as 85 percent of Norwegians subscribe to TV packages through distributors such as Telia, figures from the National Communications Authority show.

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 :

Mobile Telecommunications

NS gtvrad: Television/Radio | ccat: Corporate/Industrial News | gcat: Political/General News | gent:

Arts/Entertainment

RE eurz : Europe | norw : Norway | nordz : Nordic Countries | scandz : Scandinavia

PUB Telecompaper BV

AN Document TELEUR0020220228ei2s000dx



HD Nokia runs 5G edge slicing trials with Cellcom, Telia for enterprise VPN on commercial networks

WC 398 words

PD 28 February 2022 SN Telecompaper World

SC TELWOR

LA English

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LP

Nokia has announced at the Mobile World Congress (MWC) in Barcelona what it calls the world's first deployment of 5G Edge Slicing on a live commercial network, in conjunction with Cellcom and Telia. It lets operators offer their enterprise customers Virtual Private Network (VPN) services over commercial 4G and 5G networks. The product is now available to Nokia's global customer base.

Nokia's Edge Slicing consists of a virtualised RAN-Transport-Core-Enterprise network with a distributed **cloud** core deployed at a customer's premises or in close proximity. Telia and Cellcom will be able to use 5G Edge Slicing to offer new services to their customers, as well as to partner with **cloud** application and infrastructure service providers.

TD

Nokia and Cellcom's trial with sliced RAN-Transport-Core is taking place in Netanya in Israel, and is focused on business applications and customer service as well as enterprise interconnectivity over a high-speed metro network. Nokia and Telia are running a live trial in Tampere in Finland with engineering group Sandvik. The trial demonstrates that 5G Edge Slicing functions can operate with different mining equipment and digital applications

Nokia's 5G Edge Slicing lets operators keep critical business data traffic local, while running slice management, control and assurance on existing central mobile data centres, for cost and operational efficiency. The system is scalable, and the same virtualised network infrastructure can be used by several customers in the same area, for example in a business campus with several companies.

Depending on the enterprise customer's needs, a 5G virtual private network can be deployed in an area with a 4G/5G base station or in a campus, city, or regional area. With Nokia, CSPs can now offer their customers both on-premise 5G Private Networks or 5G Virtual Private Networks.

Nokia has also announced the launch of a new automated RAN slice management system that lets operators select, deploy and manage slices on different RAN sites, depending on their customers' requirements. This supports the management of LTE, 5G NSA and 5G SA RAN slices. It consists of service quality, resource partitioning, RAN traffic isolation, and engineering as well as per slice security management functionalities. RAN slice automation has APIs to Nokia's Digital Operations software enabling end-to-end orchestration and assurance.

colisr : CELLCOM ISRAEL LTD. | nokia : Nokia Oyj | televk : Telia Company AB

idct : Digital Cellular Technology | i34411 : Mobile Communications Devices | i7902202 : Mobile Telecommunications | i3302 : Computers/Consumer Electronics | i3303 : Networking | i3441 : Telecommunications Equipment | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | itech : Technology | iwrlssl : Wireless Area Network Technology

NS ccat : Corporate/Industrial News | c315 : Conferences/Exhibitions

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PUB Telecompaper BV

AN Document TELWOR0020220228ei2s000b7



HD Nokia deploys world's first 5G Edge Slicing solution on live commercial network with Cellcom and Telia #MWC22

WC 1,272 words

PD 28 February 2022

SN M2 Presswire

sc MTPW

LA English

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LP

- Nokia's innovative next-generation solution is available now and enables operators to provide 5G Virtual Private Network services on 4G and 5G public networks as well as offer new services to enterprise customers
- Nokia's Edge Slicing solution consists of a virtualized RAN-Transport-Core-Enterprise network with a distributed **cloud** core deployed at a customers' premises or in close proximity.

TD

Espoo, Finland – Nokia today announced the world's first deployment of 5G Edge Slicing on a live commercial network with mobile operators, Cellcom and Telia. Nokia's innovative Edge Slicing solution allows operators to offer their enterprise customers next-generation, secure, reliable, and high-performing Virtual Private Network (VPN) services over commercial 4G and 5G networks. Once launched, both companies will be able to offer new services to their customers - driving new revenue opportunities - as well as partner with cloud application and infrastructure service providers. Nokia's solution is available now for its global customer base.

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Nokia's 5G Edge Slicing solution is an evolution of Nokia's previously announced 4G/5G slicing capability. It enables operators to keep critical business data traffic local while running slice management, control, and assurance on existing central mobile data centers ensuring cost and operational efficiency. It is also scalable and the same virtualized network infrastructure can be used by several customers in the same area, for example in a business campus containing multiple companies. Based on an enterprise customer's needs, a 5G virtual private network can be flexibly deployed in an area with a 4G/5G base station or in a campus, city, or regional area. With Nokia, CSPs can now offer their customers both on-premise 5G Private Networks or 5G Virtual Private Networks.

Joe Madden, principal analyst at Mobile Experts said: "Network Slicing is the most exciting aspect of 5G, as it raises the possibility of new dimensions of 'higher performance', and enhanced ARPU from both consumers and enterprise customers. While many providers are focusing on deploying 5G private networks for enterprises, network slicing also opens up new market opportunities for operators with 5G Virtual Private Networks by keeping enterprise traffic local with Edge Slicing using the existing 4G/5G network."

Yaniv Koriat, CTO and VP Engineering at Cellcom Israel said: "Cellcom is one of the largest telecommunication groups in Israel and we have worked closely with Nokia for a long time. Their new 5G Edge Slicing solution allows Cellcom to differentiate itself in the market with innovative enterprise solutions. It also enables us to develop new opportunities with Cloud Application Service providers."

Jari Collin, CTO, Telia Finland, said "We are delighted to be the first to deploy the first-ever 5G Edge Slicing solution together with Nokia and our important customer Sandvik, who is investing heavily in digital mining technologies and the technology environment in its test mine in Tampere. Our advanced 5G network supports our customers' business by enabling new kinds of services and making the

network more efficient. We will continue to develop innovations and the latest applications, as our mission is to bring the opportunities of 5G to our customers."

Tommi Uitto, President of Mobile Networks at Nokia, said: "Nokia was the first vendor to offer a network slicing solution and we are proud to continue this pioneering story by being the first to offer 5G Edge Slicing to our customers. These successful trials cover different use cases and customer requirements and demonstrate the possibilities of network slicing. I look forward to seeing this important new area grow and deliver opportunities to our customers in the coming year."

Cloud Service and Infrastructure Provider Opportunity

A distributed and sliced 5G edge architecture creates partnering opportunities for mobile operators and Cloud Service and Infrastructure Providers. High-performing virtualized networks enable service providers to bring edge cloud application platforms close to enterprise customers. Co-location and infrastructure companies' facilities can be also utilized in the edge slicing deployments. 5G Edge Slicing combined with Nokia's new Adaptive Cloud Networking solution, which part of its scope is automating the edge cloud network, opens additional opportunities for service providers to create value for enterprises.

Nokia's 5G network slicing solution supports all LTE, 5G non-standalone, and 5G standalone (SA) devices, enabling mobile operators to utilize a huge device ecosystem and address a large customer base. This allows operators to utilize existing 4G/5G network assets, spectrum, and coverage for next-generation VPN services. Nokia's network slicing solution is based on 3GPP, IETF, and TMForum standards and architecture and works in multi-vendor environments.

Nokia launches new automated RAN management solution for Edge Slicing

Nokia has also announced the launch of a new automated RAN slice management solution which allows operators to select, deploy and manage slices across multiple RAN sites based on their customers' requirements. The new solution, which supports the management of LTE, 5G NSA and 5G SA RAN slices, consists of service quality, resource partitioning, RAN traffic isolation, and engineering as well as per slice security management functionalities. By collecting Key Performance Indicators from 4G/5G base stations operators can assure network slicing service levels to their enterprise customers. RAN slice automation has APIs to Nokia's Digital Operations software enabling end-to-end orchestration and assurance.

Experience 5G Edge Slicing live at MWC22 Barcelona

Nokia is showcasing its 5G Edge Slicing solution on a live network at MWC 2022 in Barcelona. Nokia was first to demonstrate 4G/5G network slicing across RAN-Transport-Core with management and assurance. A number of trials have already taken place with Nokia's global customer base including deployments of new slicing capabilities such as 5G standalone network slicing, Fixed Wireless Access slicing, slicing in 5G private networks as well as slice management automation and orchestration. At MWC22, Nokia will also demonstrate 5G dynamic slice selection in a live network for enterprise applications.

Resources:

Nokia Network Slicing

Nokia 5G Edge Slicing

Nokia Edge Slicing Whitepaper

Nokia launches end-to-end 4G and 5G New Radio slicing

Orange and Nokia deploy the first Industry 4.0 4G/5G private network with network slicing in French factory

Nokia offers world's first automated 4G/5G network slicing within RAN, transport and core domains

Nokia and Mobily pilot world's first 4G and 5G Fixed Wireless Access network slicing

Network slicing explained

Nokia Digital Operations Center

About Nokia

At Nokia, we create technology that helps the world act together.

As a trusted partner for critical networks, we are committed to innovation and technology leadership across mobile, fixed and cloud networks. We create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Adhering to the highest standards of integrity and security, we help build the capabilities needed for a more productive, sustainable, and inclusive world.

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RE fin: Finland | eecz: European Union Countries | eurz: Europe | nordz: Nordic Countries

PUB Normans Media Ltd

AN Document MTPW000020220228ei2s000gp



HD Sweden: PTS provides SEK 22.50mn for improved connectivity on trains

CR M-Brain

WC 104 words

PD 23 February 2022

SN Esmerk Swedish News

sc ESMKSW

LA English

CY Copyright 2022. M-Brain

LP

Göteborgs Posten, 23 Feb 2022, online:- The Swedish Post and Telecom Authority (Post- och telestyrelsen, PTS) has granted SEK 22.50mn (EUR 2.24mn USD 2.59mn) to telecom company Telia and mobile network operator Net 4 Mobility for improving mobile **connectivity** on trains. Telia will receive financing for infrastructure investments in the Åskott and Namntall tunnels at the Bothnia Line. Net 4 Mobility will be funded for investing in similar infrastructure in the Björnböle tunnel on the same line. This concerns basic network equipment for securing coverage in the tunnels.

co tswpta: The Swedish Post and Telecom Authority | televk: Telia Company AB

irdops: Highway Operation | i7902202: Mobile Telecommunications | i71: Rail Transport | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | ibcs: Business/Consumer Services | irailtr: Land Transport | itsp: Transportation/Logistics

NS nabst : Abstracts | ncat : Content Types

RE swed : Sweden | eecz : European Union Countries | eurz : Europe | nordz : Nordic Countries | scandz :

Scandinavia

IPD Government, Subsidies

PUB M-Brain Insight Oy

AN Document ESMKSW0020220224ei2n00015



HD Telia Estonia drops Nord Print channels, to look for other Russian content

WC 119 words

PD 23 February 2022 SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Estonia announced it's stopping the cooperation with the company Nord Print, which holds rights to the TV channels RBK Eesti, Ren TV Estonia, NTV Estonia and others in the country. A total of 26 channels are represented by Nord Print in Estonia.

The decision was taken after recent circumstances highlighted how the background of Nord Print does not correspond to responsible business standards as applied by Telia to its partners, the company said.

TD

Telia Estonia will stop airing the TV channels from Nord Print from 25 April. The operator said it is looking for other attractive TV content in the Russian language as a replacement.

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 :

Mobile Telecommunications

NS gdip: International Relations | ccat: Corporate/Industrial News | gcat: Political/General News | gpir

: Politics/International Relations

RE estnia : Estonia | eurz : Europe | russ : Russia | asiaz : Asia | baltst : Baltic States | bric : BRICS

Countries | devgcoz : Emerging Market Countries | dvpcoz : Developing Economies | eecz :

European Union Countries | eeurz : Central/Eastern Europe | ussrz : CIS Countries

PUB Telecompaper BV

AN Document TELEUR0020220223ei2n000rx



HD Finland: Sato's rental homes to get faster Telia broadband speeds

CR M-Brain

WC 111 words

PD 22 February 2022

SN Esmerk Finnish News

SC ESMKFI

LA English

CY Copyright 2022. M-Brain

LP

Press Release Sato, 22 Feb 2022, online:- Rental housing provider Sato's rental homes in Finland will get faster broadband access in spring 2022. By 31 May 2022, access to broadband at 50 Mbps will be included in the rent in all of the approximately 24,000 Sato rental homes in properties connected to Swedish telecommunications company Telia's **fibre**-optic network. Residents of some Sato rental homes will even be able to access free housing company broadband at up to 100 Mbp. Sato's majority shareholder is Balder Finska Otas, part of Swedish property developer Fastighets AB Balder.

CO Ivbcks: Fastighets AB Balder | televk: Telia Company AB

IN iwrlssl: Wireless Area Network Technology | icre: Real Estate/Construction | i3302: Computers/Consumer Electronics | i3303: Networking | itech: Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications | i85: Real Estate Services/Transactions | ireest: Real Estate

NS c184 : Joint Ventures/Consortia | c22 : New Products/Services | nabst : Abstracts | ccat : Corporate/Industrial News | c18 : Ownership Changes | cactio : Corporate Actions | cexpro : Products/Services | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE fin: Finland | eecz: European Union Countries | eurz: Europe | nordz: Nordic Countries

IPD Investment Review

PUB M-Brain Insight Oy

AN Document ESMKFI0020220224ei2m0000b

HD Lithuania: Telia Lietuva to stop rebroadcasting 25 Russian TV channels

CR M-Brain

WC 87 words

PD 22 February 2022

SN Esmerk Baltic News

SC ESMKBA

LA English

CY Copyright 2022. M-Brain

LP

DELFI, 22 Feb 2022, online:- The Lithuanian telecommunications operator, Telia Lietuva, will stop rebroadcasting 25 Russian TV channels, including Dom Kino, First Baltic Channel, NTV World Lithuania, and REN TV, on its Telia TV platform. The rebroadcasting contract with Media One LT will end on 30 April 2022. Telia Lietuva will not conclude a new contract to rebroadcast the channels due to doubts over transparency. Telia TV will continue to carry 58 Russian-language channels.

CO Itvcom: Telia Lietuva AB | televk: Telia Company AB

IN imed : Media/Entertainment | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS nabst: Abstracts | ccat: Corporate/Industrial News | ncat: Content Types

RE lith: Lithuania | russ: Russia | asiaz: Asia | baltst: Baltic States | bric: BRICS Countries | devgcoz: Emerging Market Countries | dvpcoz: Developing Economies | eecz: European Union Countries | eeurz: Central/Eastern Europe | eurz: Europe | ussrz: CIS Countries

IPD Corporate, Company Reviews

PUB M-Brain Insight Oy

AN Document ESMKBA0020220223ei2m00047

HD Estonia: Telia Eesti and Elisa Eesti terminate cooperation with Nord Print

CR M-Brain

WC 159 words

PD 22 February 2022

SN Esmerk Baltic News

SC ESMKBA

LA English

CY Copyright 2022. M-Brain

LP

DELFI, 22 Feb 2022, online:- Estonian telecommunications company Telia Eesti has decided to terminate its cooperation with Nord Print, which owns the rights to broadcast 26 Russian TV channels in Estonia. Due to the termination of the cooperation, Telia TV will no longer broadcast Nord Print's TV channels as of 25 April 2022. According to Telia Eesti, the background of Nord Print is not in line with the business standards Telia has set for its partners. The decision is connected to the media coverage about a Latvian case regarding a breach of EU sanctions by companies representing Russian TV channels. Telia's competitor Elisa Eesti is also terminating its contract with Nord Print with two months' notice. Toomas Ili, content procurement manager at Elisa, said that Elisa expects to see an official position from the competent state authorities in Estonia on the Latvian court ruling.

CO televk: Telia Company AB

IN imed : Media/Entertainment | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS nabst : Abstracts | ccat : Corporate/Industrial News | ncat : Content Types

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IPD Corporate, Company Reviews

PUB M-Brain Insight Oy

AN Document ESMKBA0020220223ei2m00037



SE CE Noticias Financieras English

HD Estonia and Lithuania to close more than 20 Russian channels due to commercial criteria

WC 362 words

PD 22 February 2022

SN CE NoticiasFinancieras

SC NFINCE

LA English

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LP

(corrects headline) Riga, Feb 22 The largest **cable** and Internet TV companies in Estonia and Lithuania announced this Tuesday that they will stop broadcasting more than 20 Russian TV channels as of the end of April. Both Swedish-owned Telia Eesti and its rival Elisa in Estonia and Telia Lietuva in Lithuania announced this decision the day after Russian President Vladimir Putin recognized the self-proclaimed separatist republics of Donbas. However, Telia justified its decision on the grounds that the broadcasting conditions of Russian broadcasters were not compatible with the Swedish group's business practices. In Estonia, the Telia subsidiary reported the termination of its relations with Nord Print, the rights provider of 26 Russian channels, on the grounds that the latter's practices are not in line with its company's commercial standards. Local media claimed that Elisa had acted for similar reasons.

TD

From Lithuania, Telia announced that it would stop transmitting the Russian channels, whose contract was due to expire at the end of April, and that it would not enter into another agreement with another similar company because it would not meet its criteria of commercial transparency. The Russian channels affected include news, film and sports programs, some of which had previously been temporarily suspended on the grounds that they broadcast xenophobic propaganda or content. About 24% of Estonia's population is of Russian origin, a percentage that drops to 5% in Lithuania. The majority of the adult population in both Baltic countries has Russian as a second language and tends to watch Russian channels for their movie or entertainment programs. In Latvia, the population of Russian origin accounts for 25.4 percent, while the percentage of those fluent in Russian is somewhat higher. Telecommunications and entertainment company Tet, a Telia partner, has not explained its future plans with Russian-language channels. Tet and other TV providers in Latvia have complied with decisions of the National Electronic Media Council and temporarily suspended Russian channels, either for reasons related to their content or for irregularities in their licenses. EFE jkz/gc/psh

co televk: Telia Company AB

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PR Newswire

European Edge Computing Telco Strategies: HD Telefonica Tech, Telia and Proximus WC 646 words PD 22 February 2022 21:00 ET PR Newswire SN SC PRN **English** LA CY Copyright © 2022 PR Newswire Association LLC. All Rights Reserved. LP

DUBLIN, Feb. 22, 2022 /PRNewswire/ -- The "Edge Computing - Europe Telco Positioning Strategies and Monetization Opportunities" report has been added to ResearchAndMarkets.com's offering.

Edge computing enables new use cases with low-latency, real-time data processing, cost savings, and **privacy** and security. The emerging market presents opportunities for telecom operators to monetize edge computing solutions. Telecom operators provide the **connectivity** for the edge computing network, and can leverage their distributed infrastructure network footprint (e.g. base stations, switching facilities, and other access locations) to deploy edge computing capabilities in distributed edge locations. Edge computing helps telcos support new use cases, optimize workloads, and enhance support for real-time, low-latency applications over their 4G, 5G, and fiber networks.

Telecom operators in Europe are partnering with telcos, deploying multi-access edge services, creating independent edge computing companies and divisions, and deploying edge services alongside 4G/5G private networks.

The report provides an executive-level overview of the emerging edge computing market in Europe. It delivers quantitative and qualitative insights into the edge computing market, analyzing key trends and growth drivers in the region.

It provides an in-depth analysis of the following:

-- Section 1: Edge Computing - Context and Definitions: This section defines edge computing, highlights the market drivers, and key players. This sections also discusses the global edge computing market opportunity and vertical market opportunities.

-- Section 2: Telco Activity & Key Trends in Europe: This section analyzes

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telco activity in the edge computing market in Europe, providing examples

and key market trends.

-- Section 3: Case Studies: This section provides three case studies on European telcos' strategies, partnerships, and go-to-market approaches

the edge computing market.

-- Section 4: Key findings: A summary
of key findings and growth
 opportunities for Europe's edge
computing market.

Report Scope:

- -- Telcos can tap into opportunities in areas including Industry 4.0, autonomous vehicles, smart cities and AI and big data analytics by providing edge computing services.
- -- The global edge computing market opportunity will reach \$17.8 billion by 2025.
- -- The manufacturing, retail banking, insurance, energy, and utilities verticals are among the top ten verticals presenting opportunities in the

edge computing market.

-- Telcos' activity in the edge computing space in Europe has ramped up with

new partnerships, services, and business units. $% \left(\frac{1}{2}\right) =\frac{1}{2}\left(\frac{1}{2}\right) ^{2}$

Case Studies

- -- Case Study Telefonica Tech
- -- Case Study Telia
- -- Case Study Proximus

Companies Mentioned

Accenture

- -- Akamai
- -- Alibaba
- -- Amazon Web Services
- -- APM Terminals
- -- AT&T
- -- Atlas Edge Data Centers

- -- Atos
- -- Aurrigo
- -- Baidu
- -- C2RO
- -- Capgemini
- -- China Unicom
- -- Cisco
- -- Cloudflare
- -- Codit
- -- Dell Technologies
- -- Deloitte
- -- Deutsche Telekom
- -- Digita
- -- Digital Colony
- -- EE
- -- Ekinops
- -- Equinix
- -- Ericsson
- -- Falt Communications
- -- Fujitsu
- -- Gazprom Neft
- -- Gestamp
- -- Google
- -- GSMA
- -- Hewlett Packard EnterpriseHewlett Packard Enterprise
 - -- Huawei
 - -- IBM
 - -- Inspur
 - -- Juniper
 - -- Kalmar
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- -- Microsoft
- -- MobiledgeX
- -- MTS
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- -- Noovle SpA
- -- NVIDIA
- -- 02
- -- Orange
- -- Plug and Play
- -- Proximus
- -- Rostelecom
- -- Schneider Electric
- -- Singtel
- -- SK Telecom
- -- Sunrise
- -- Tata Consultancy Services
- -- Telefonica
- -- Telia
- -- Telstra
- -- Tencent Cloud
- -- TIM
- -- T-Systems
- -- UPC
- -- Verizon
- -- Virgin Media
- -- VMware
- -- Vodafone
- -- VTB Bank
- -- YADRO

For more information about this report visit https://www.researchandmarkets.com/r/5so4l3

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SOURCE Research and Markets

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CO pttblg : Proximus SA | televk : Telia Company AB |

comtn : Telefonica SA

IN iedco : Edge Computing | i7902 : Telecommunication

Services | icomp : Computing | i3302 :

Computers/Consumer Electronics | i3303 : Networking | i8394 : Computer Services | iappsp : Cloud Computing | ibcs : Business/Consumer Services | idserv : Data Services | iint : Online Service Providers | itech : Technology | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

ccat: Corporate/Industrial News | npress: Press

Releases | ncat : Content Types

RE eurz : Europe

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SE CE Noticias Financieras English

HD Latvia and Lithuania to close more than 20 Russian channels due to commercial criteria

WC 360 words

PD 22 February 2022

SN CE NoticiasFinancieras

SC NFINCE

LA English

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LP

Riga, Feb 22 The largest **cable** and Internet TV companies in Estonia and Lithuania announced this Tuesday that they will stop broadcasting more than 20 Russian TV channels as of the end of April. Both Swedish-owned Telia Eesti and its rival Elisa in Estonia and Telia Lietuva in Lithuania announced this decision the day after Russian President Vladimir Putin recognized the self-proclaimed separatist republics of Donbas. However, Telia justified its decision on the grounds that the broadcasting conditions of Russian broadcasters were not compatible with the Swedish group's business practices. In Estonia, the Telia subsidiary reported the termination of its relations with Nord Print, the rights provider of 26 Russian channels, on the grounds that the latter's practices are not in line with its company's commercial standards. Local media claimed that Elisa had acted for similar reasons.

TD

From Lithuania, Telia announced that it would stop transmitting the Russian channels, whose contract was due to expire at the end of April, and that it would not enter into another agreement with another similar company because it would not meet its criteria of commercial transparency. The Russian channels affected include news, film and sports programs, some of which had previously been temporarily suspended on the grounds that they broadcast xenophobic propaganda or content. About 24% of Estonia's population is of Russian origin, a percentage that drops to 5% in Lithuania. The majority of the adult population in both Baltic countries has Russian as a second language and tends to watch Russian channels for their movie or entertainment programs. In Latvia, the population of Russian origin accounts for 25.4 percent, while the percentage of those fluent in Russian is somewhat higher. Telecommunications and entertainment company Tet, a Telia partner, has not explained its future plans with Russian-language channels. Tet and other TV providers in Latvia have complied with decisions of the National Electronic Media Council and temporarily suspended Russian channels, either for reasons related to their content or for irregularities in their licenses. EFE jkz/gc/psh

co televk: Telia Company AB

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RE russ: Russia | lith: Lithuania | estnia: Estonia | latv: Latvia | asiaz: Asia | baltst: Baltic States | bric: BRICS Countries | devgcoz: Emerging Market Countries | dvpcoz: Developing Economies | eecz: European Union Countries | eeurz: Central/Eastern Europe | eurz: Europe | ussrz: CIS Countries

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Arelion Recognized in the 2022 Gartner Magic HD Quadrant for Network Services, Global WC 634 words PD 22 February 2022 14:08 ET PR Newswire SN SC PRN **English** LA CY Copyright © 2022 PR Newswire Association LLC. All Rights Reserved.

STOCKHOLM, Feb. 22, 2022 /PRNewswire/ -- Arelion, formerly Telia Carrier, today announced it has been recognized in the Gartner Magic Quadrant for Network Services, Global(1). The report evaluated 18 network service providers on the completeness of their vision and their ability to execute on services and strategy.

Arelion, which recently rebranded from Telia Carrier following the separation from Telia Company last year, offers global network services including Internet Services, Ethernet, MPLS, Cloud Connect, IoT backbone services, DDoS Mitigation, and SD-WAN. Arelion's AS1299 network is ranked the world's best-connected Internet backbone(2), directly connecting nearly 65 percent of global Internet routes.

Gartner writes in the report, "Gartner continues to observe changes in enterprise requirements and buying criteria for global networks. The COVID-19 pandemic has highlighted the true value of agility for enterprise networks, as enterprises have had to rapidly change working practices, accelerate digital and cloud transformations, and cope with rapidly changing business circumstances."

"Our recognition in the Magic Quadrant as a standalone company is an important reaffirmation of our position as a global provider of high-quality network services, especially for enterprises who are looking for new and better options," said Staffan Göjeryd, CEO, Arelion. "With support from our new owners, we will continue our global growth journey, focusing on network buildouts in key markets, as well as capitalizing on the market shift towards Internet-centric networks, high-capacity datacenter and cloud connectivity, and other enterprise services."

Top-ranked global backbone

Arelion solves global connectivity challenges for multinational enterprises whose businesses rely on their digital infrastructure. On top of the worlds #1 ranked IP backbone and a unique ecosystem of cloud and network service providers, we provide an award-winning customer experience to customers in 125 countries

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worldwide. Our global Internet services connect to 700+ cloud, security and content providers with low latency. For further resiliency, our private Cloud Connect service connects directly to Amazon Web Services, Microsoft Azure, Google Cloud, IBM Cloud and Oracle cloud across North America, Europe and Asia. Explore our network.

Disclaimer: Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

Images: Images of spokespeople, logo and more can be downloaded here.

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About Arelion

Formerly Telia Carrier, Arelion is a leading light in global connectivity services. We've been keeping the world connected since 1993 and today our global IP backbone, AS1299, is ranked number one in the world. Our network spans Europe, North America, and Asia with 70,000 km of optical fiber and 1,700 MPLS endpoints. Our award-winning customer service team supports our expansive customer base, who rely on us for their business-critical services. Discover more at www.arelion.com and follow us on LinkedIn and Twitter.

- (1) Gartner "Magic Quadrant for Network Services, Global" by Neil Rickard, Bjarne Munch, Danellie Young, Karen Brown. 21 February, 2022.
- (2) Kentik Market Intelligence

View original content to download multimedia:

https://www.prnewswire.com/news-releases/arelion-recognized-in-the-2022-gartner-magic-quadrant-for-network-services-global-301487439.html

SOURCE Arelion

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CO televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless

Telecommunications Services | i7902202 : Mobile

Telecommunications

NS npress : Press Releases | ncat : Content Types

RE usa: United States | namz: North America

PUB PR Newswire Association, Inc.

AN Document PRN0000020220222ei2m000k6



HD Estonia: Also Elisa to discontinue cooperation with provider of Russian TV channels

WC 360 words

PD 22 February 2022

ET 12:33

SN Baltic Daily - Political/Social News

SC BALPOLE

LA English

CY © 2022 Baltic News Service

LP

TALLINN, Feb 22, BNS – Just like rival **cable** and telecom operator Telia, Elisa announced on Tuesday that it will terminate its contract with Nord Print OU, broadcaster of Russian TV channels, taking into account the public interest and expectations of the society.

The Nord Print channels broadcast as part of Elisa's main package are PBK, REN TV, NTV Mir, Dom Kino, and Kinokomedia HD, the telecommunications company said.

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In addition, Elisa has made an enquiry to the Financial Intelligence Unit (FIU) to obtain further information on a Latvian court decision reported in the media concerning the violation of EU sanctions by companies representing Russian TV channels.

"We are definitely awaiting a formal position from the competent state authorities on the Latvian court decision, which would give all Estonian operators formal guidance regarding the termination of the contract, blocking the transmission of the channels or withholding payments," Toomas IIi, head of content acquisition at Elisa, said in a press release.

The existing contract will be terminated with two months' notice in accordance with the obligation to give notice set forth in the contract.

"If the official position of the state is added to this, an obligation may arise for all operators to terminate their contracts earlier." Ili said.

To cater to its Russian-speaking customer base, Elisa plans to increase the procurement volumes of Russian-language content in streaming channels in the near future.

"We are also currently developing a new Elisa original series project in Russian and Estonian," Ili added.

Elisa will personally notify customers of the change.

Telia Estonia announced earlier on Tuesday that it has decided to terminate cooperation with Nord Print OU, which owns the rights to broadcast in Estonia PBK Eesti, REN TV Estonia, NTV Mir Estonia and several other channels. Telia said that the move, effective April 25, is driven by recent events according to which the background of Nord Print OU does not correspond to the standards of responsible business set by Telia for its cooperation partners.

Tallinn newsroom, +372 56 505 306, majandus@bns.ee

Baltic News Service

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

estnia: Estonia | russ: Russia | asiaz: Asia | baltst: Baltic States | bric: BRICS Countries | devgcoz: Emerging Market Countries | dvpcoz: Developing Economies | eecz: European Union Countries | eeurz: Central/Eastern Europe | eurz: Europe | ussrz: CIS Countries

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IPD Estonia

PUB AS Postimees Grupp

AN Document BALPOLE020220222ei2m005eh



HD Estonia: Also Elisa to discontinue cooperation with provider of Russian TV channels

WC 360 words

PD 22 February 2022

ET 12:33

SN Baltic Business Daily

SC BALDAI

LA English

CY (c) 2022 Baltic News Service

LP

TALLINN, Feb 22, BNS – Just like rival cable and telecom operator Telia, Elisa announced on Tuesday that it will terminate its contract with Nord Print OU, broadcaster of Russian TV channels, taking into account the public interest and expectations of the society.

The Nord Print channels broadcast as part of Elisa's main package are PBK, REN TV, NTV Mir, Dom Kino, and Kinokomedia HD, the telecommunications company said.

TD

In addition, Elisa has made an enquiry to the Financial Intelligence Unit (FIU) to obtain further information on a Latvian court decision reported in the media concerning the violation of EU sanctions by companies representing Russian TV channels.

"We are definitely awaiting a formal position from the competent state authorities on the Latvian court decision, which would give all Estonian operators formal guidance regarding the termination of the contract, blocking the transmission of the channels or withholding payments," Toomas III, head of content acquisition at Elisa, said in a press release.

The existing contract will be terminated with two months' notice in accordance with the obligation to give notice set forth in the contract.

"If the official position of the state is added to this, an obligation may arise for all operators to terminate their contracts earlier," Ili said.

To cater to its Russian-speaking customer base, Elisa plans to increase the procurement volumes of Russian-language content in streaming channels in the near future.

"We are also currently developing a new Elisa original series project in Russian and Estonian," Ili added.

Elisa will personally notify customers of the change.

Telia Estonia announced earlier on Tuesday that it has decided to terminate cooperation with Nord Print OU, which owns the rights to broadcast in Estonia PBK Eesti, REN TV Estonia, NTV Mir Estonia and several other channels. Telia said that the move, effective April 25, is driven by recent events according to which the background of Nord Print OU does not correspond to the standards of responsible business set by Telia for its cooperation partners.

Tallinn newsroom, +372 56 505 306, majandus@bns.ee

Baltic News Service

co televk : Telia Company AB

RE estnia : Estonia | russ : Russia | asiaz : Asia | baltst : Baltic States | bric : BRICS Countries | devgcoz : Emerging Market Countries | dvpcoz : Developing Economies | eecz : European Union Countries |

eeurz : Central/Eastern Europe | eurz : Europe | ussrz : CIS Countries

IPD Estonia

PUB AS Postimees Grupp

AN Document BALDAI0020220222ei2m002bd



HD Telia Finland appoints new director for Assembly, next fair in April focuses on gaming

WC 133 words

PD 22 February 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Finland has announced the appointment of Emilia Mikkola as director for the bi-annual Assembly computer fairs. The fairs started up in 1992 and Telia acquired Assembly in 2018. Mikkola has previously spent ten years as a production manager at the Helsinki music event Flow Festival and will now be responsible for Assembly event business and its development.

The operator said the next Assembly Festival will be provisionally be a live event, Covid-19 permitting, at Helsinki Fair Center from 01-03 April 2022. It will focus on **gaming** events and productions. Mikkola's area of responsibility is the event business of the Telia-owned Assembly and the development and expansion of the event to a new level.

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 :

Mobile Telecommunications

NS ccat : Corporate/Industrial News | c411 : Management Moves | cslmc : Senior Level Management |

cmmm: Middle/Lower Management | c41: Management | ncat: Content Types | nfact: Factiva

Filters | nfcpex : C&E Executive News Filter | nfcpin : C&E Industry News Filter

RE fin: Finland | eurz: Europe | eecz: European Union Countries | nordz: Nordic Countries

PUB Telecompaper BV

AN Document TELEUR0020220222ei2m000b9



HD Swedish regulator provides railway tunnel connectivity funding to Telia and Net4Mobility

WC 180 words

PD 21 February 2022 SN Telecompaper Europe

SC TELEUR
LA English

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LP

Swedish communications regulator PTS said it has resolved to provide financial support to Telia Sweden and to Net4Mobility, the Tele2-Telenor Sweden joint venture, towards improving mobile reception in railways tunnels.

PTS has awarded Telia support to build infrastructure in the Askott and Namntall tunnel on the Bothnia Line. This infrastructure will be shared by other operators, and includes the establishment of site installations in service tunnels and connections to the Swedish Transport Administration's **cable** infrastructure.

TD

The regulator has granted Net4Mobility support for to establish corresponding infrastructure in the Bjornbole tunnel on the Bothnia Line.

The regulator has not specified how much it is providing to each operator. In January, it said it would allocate SEK 22.5 million for passenger connectivity in railways tunnels on both the Bothnia and Adal lines. The Bothnia Line runs for 120 km from Umea via Ornskoldsvik to Hoga Kusten Airport, which lies between the towns of Kramfors and Solleftea. The Adalen Line (Adalsbanan) runs for 184 kilometres between Sundsvall and Langsele.

co trfkvk : Swedish Transport Administration | televk : Telia Company AB | tvk : Telenor ASA

IN irdops: Highway Operation | ibcs: Business/Consumer Services | irailtr: Land Transport | itsp: Transportation/Logistics | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications

NS ccat : Corporate/Industrial News | c131 : Regulatory Bodies | c13 : Regulation/Government Policy | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE eurz : Europe | swed : Sweden | eecz : European Union Countries | nordz : Nordic Countries | scandz : Scandinavia

PUB Telecompaper BV

AN Document TELEUR0020220221ei2l000b5



HD Telia Estonia, Aripaev launch e-training platform on cyber security

WC 58 words

PD 17 February 2022 SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Estonia and the Estonian news publishing company Aripaev have developed an electronic training platform focused on cyber security issues. The platform should help companies raise the cyber security skills of their employees.

Materials available on the **platform** will be refreshed as new **cyber** security threats crop up.

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202

: Mobile Telecommunications

NS c22 : New Products/Services | ccat : Corporate/Industrial News | cexpro : Products/Services | ncat

: Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE estnia : Estonia | eurz : Europe | baltst : Baltic States | eecz : European Union Countries | eeurz :

Central/Eastern Europe

PUB Telecompaper BV

AN Document TELEUR0020220217ei2h000jm



HD Telefonica extends Eco Rating label to LatAm markets

WC 191 words

PD 17 February 2022

SN Telecompaper Americas

SC TELAM

LA English

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LP

Telefonica said it has implemented the <u>Eco Rating</u> system to measure the **sustainability** of mobile phones in all its markets, after extending it to its Latin American operations. The company launched the initiative in its main markets of Spain, Germany, the UK and Brazil last year and is now rolling it out in Argentina, Colombia, Chile, Chile, Ecuador, Mexico, Peru and Uruguay.

Launched with Deutsche Telekom, Orange, Telia Company and Vodafone, the Eco Rating system is designed to help people identify and compare the most sustainable phones, and encourage suppliers to reduce the environmental impact of their **devices**. It now includes more than 200 mobile phone models from 16 manufacturers, doubling the number of qualified **devices** at its launch in May 2021.

TD

Telefonica added that the service is now available in seven of its eight Latin American operations, with the exception of Venezuela, where it has suspended device sales. It said the announcement paves the way for Eco Rating to become a global standardised labelling system, providing consumers around the world with consistent and transparent information on the environmental impact of their mobile phones.

co televk : Telia Company AB | comtn : Telefonica SA

IN i7902202 : Mobile Telecommunications | icellph : Cell/Mobile/Smart Phones | i3302 : Computers/Consumer Electronics | i3441 : Telecommunications Equipment | i34411 : Mobile Communications Devices | i3454 : Personal Electronics | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | ielec : Consumer Electronics | ihandaps : Handheld Electronic Devices | itech : Technology

NS ccat : Corporate/Industrial News | c22 : New Products/Services | cexpro : Products/Services | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE samz : South America | chil : Chile | lamz : Latin America | devgcoz : Emerging Market Countries

PUB Telecompaper BV

AN Document TELAM00020220217ei2h0008f



SE Extra

HD Apple faces new Dutch fine; PPF unit to acquire RTL Croatia

BY Frances Josephine Espeso

WC 977 words

PD 15 February 2022

SN SNL Financial Extra

SC SNLFE

LA English

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LP

TOP NEWS IN TMT

* The Netherlands Authority for Consumers and Markets fined Apple Inc. another €5 million for failing to comply with an earlier order that asked Apple to alter conditions in its App Store in relation to **payment** options for dating apps. Apple's total fine is now worth €20 million.

TD

- * PPF Group NV unit CME Media Enterprises BV agreed to fully acquire RTL Hrvatska DOO, or RTL Croatia, in a deal valuing the assets at €50 million. The transaction is expected to close mid-2022.
- ➤ Global Multichannel: Multichannel subscribers stagnate in Western Europe minor markets

In 2021, pay TV in the smaller Western European minor markets, including Cyprus, Iceland, Luxembourg and Malta, which account for less than 1% of Western Europe's TV households, remained flat in terms of subscriber growth, while revenues grew 2.1%.

➤ Technology: After 1 month, 2022 already record year for video game M&A

Announced video game M&A hit \$95.52 billion in gross transaction value in early February, making 2022 more than 4x the size of the second-largest year in Kagan's analysis.

TECHNOLOGY

- * International Business Machines Corp. will create 200 jobs across Ireland with an eye on growing its research, development and innovation work, RTE reported. The company has a head count of over 3,000 in Ireland.
- * In more IBM news, the company is building a fifth Technology Innovation Centre in Portugal, Telecompaper reported, citing an Economia Online report that quoted IBM Portugal President Ricardo Martinho.
- * Petri Kairinen is stepping down as CEO of Finland-based cybersecurity company Nixu Oyj in June.

INTERNET & OTT

- * EU legislator Christel Schaldemose said the bloc's lawmakers and member states could strike a deal on the proposed Digital Services Act by the end of June, Reuters reported. The act aims to require improved content moderation practices by large online platforms and to hold them accountable for their algorithms.
- * A California judge certified Norfolk County Council's suit against Apple as a class action, The Daily Telegraph (London) reported. The English council is suing the U.S. tech company for allegedly misleading shareholders on the weak demand for iPhones in China in 2018.
- * Meta Platforms Inc. rolled out its Facebook News service to a limited number of users in France, Le Parisien reported.
- * ITV Studios Ltd. is teaming up with Samsung TV Plus to roll out new, free ad-supported streaming TV channels Storylands and a dedicated Hell's Kitchen channel in Europe, starting with the U.K.

MEDIA

- * BBC Studios Ltd. promoted BBC Studios Americas President Rebecca Glashow to CEO of global distribution, effective March 1. The British Broadcasting Corp. owns BBC Studios.
- * London-based game distribution platform Flexion Mobile PLC entered an agreement with Tap4Fun Co. Ltd., which will see its game, Kingdom Guard, launching on Amazon.com Inc. and Samsung Electronics Co. Ltd.'s Samsung Galaxy app stores in the second quarter.
- * Swedish horse racing operator ATG joined the Scout Gaming Network, which will see it offering fantasy sports tournaments with prize pools, including the Champions League Knockout Tournament.

TELECOMMUNICATIONS

- * The chief executives of European telcos Vodafone Group PLC, Deutsche Telekom AG, Orange SA and Telefónica SA called on EU lawmakers to introduce new rules for large technology companies to increase their investments in internet infrastructure in the bloc.
- * Telecom Italia SpA CEO Pietro Labriola proposed a new industrial plan, with the board acknowledging that Labriola will continue to study strategic options, including those other than vertical integration. The telco also named Adrian Calaza as CFO, effective March 1, succeeding Giovanni Ronca. Telecom Italia is considering splitting its domestic business to form an infrastructure entity and a service business to aid a potential merger with rival Open Fiber SpA, Reuters reported.
- * Luxembourg-based telco Millicom International Cellular SA unveiled plans to set up a new tower company to include up to 10,000 towers in the next 12 to 18 months.
- * The U.K. government is seeking a legally binding commitment to invest in the country from Viasat Inc. in relation to its planned acquisition of Inmarsat Group Ltd., Advanced Television reported.
- * Telefónica said it conducted the validation of its new Open Radio Access Network all-in-one 5G stand-alone small cell, powered by QUALCOMM Inc.'s FSM100 5G RAN Platform.
- * Telia Co. AB unit Telia Eesti began preparatory works to shut down its 3G network by the end of 2023, Telecompaper reported.
- * Nokia Corp. secured a contract with 450connect GmbH to build its nationwide LTE450 radio network and to supply the former's radio system technology for the network.
- * Eutelsat Communications SA expanded its carriage partnership with smart networks company Marlink AS to support market growth in Africa and the Middle East as well as to integrate the Americas and Asia into Eutelsat's portfolio of satellite resources used by Marlink.

FILM & TV

- * Ukraine imposed sanctions on TV channel Nash TV amid ongoing tensions between the country and Russia, Digital TV Europe reported.
- * Swiss direct-to-home platform operator Kabelio added six channels, Super RTL, ORF Sport+, BBC Three, CBBC, Rouge TV and auftanken.TV, on Eutelsat's Hotbird, Broadband TV News reported.

Click here for a summary of indexes on the S&P Capital IQ Pro platform.

Subscribe here to our new weekly feature, APAC TechWatch, which highlights the latest on topics such as artificial intelligence, financial technology, the internet of things, cloud computing, cybersecurity, 5G and semiconductors in the Asia-Pacific region.

Phoebe Magdirila, Anne Freier, Sylvia Edwards Davis, Koen Pijnappels and Gerard O'Dwyer contributed to this report.

The Daily Dose has an editorial deadline of 7 a.m. London time. Some external links may require a subscription. Links are current as of publication time, and we are not responsible if those links are unavailable later.

- applc: Apple Inc. | opeta: Authority for Consumers and Markets of the Netherlands | ppfnth: PPF Group N.V. | audifi: RTL Group S.A. | televk: Telia Company AB | brtlsm: Bertelsmann SE & Co. KGaA
- IN i7902 : Telecommunication Services | i3302 : Computers/Consumer Electronics | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | i831 : Financial Investment

- Services | i97411 : Broadcasting | ifinal : Financial Services | iinv : Investing/Securities | imed : Media/Entertainment | itech : Technology
- NS ccat : Corporate/Industrial News | c22 : New Products/Services | cexpro : Products/Services | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter
- RE crtia : Croatia | porl : Portugal | weurz : Western Europe | balkz : Balkan States | eecz : European Union Countries | eeurz : Central/Eastern Europe | eurz : Europe | medz : Mediterranean
- IPD Industry News
- PUB S&P Global Market Intelligence
- AN Document SNLFE00020220216ei2f0008e

Telia Company AB

MarketLine Company Profiles, 10 February 2022, 8566 words, (English)
Telia Company ABTelia Company AB (Telia or 'the company') is a provider of
telecommunications services. The company offers mobile telephony services, mobile
voice and data, ip capacity, fixed voice and data, devices, financing, cloud, ICT
...



HD Arelion Upgrades Capacity and Launches Expanded
Capabilities at 1623 Farnam's Interconnected Edge
Data Center in Omaha

WC 815 words

PD 9 February 2022

ET 14:03

SN PR Newswire

SC PRN LA English

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capacity.

Avoids Supply Chain Challenges, Enabling Rapid Deployments on Arelion's New 800G Route for Superior Network Performance and Diversity

OMAHA, Neb., Feb. 9, 2022 /PRNewswire/ -- 1623 Farnam, a regional leader in network-neutral edge interconnection and data center services, announces Arelion, the newly rebranded Telia Carrier and the company offering the #1 ranked global internet backbone, has upgraded its network capacity and capabilities at 1623's interconnected edge data center in Omaha. This network expansion also enables access to Arelion's new multi-terabit optical fiber route, which delivers high-capacity bandwidth from Chicago to Denver and leverages Infinera's latest ICE6 800G coherent transponder technology. This robust, diverse open line system from Arelion offers 1623 Farnam customers rapid deployments and an ideal foundation for superior network performance and next-generation applications and **connectivity** requirements.

Arelion delivers more than 70,000km of optical fiber and 1,700 MPLS endpoints connecting customers in 125 countries worldwide to deliver digital services to the edge. The company's presence within the 1623 Farnam carrier and cloud ecosystem has been augmented by its recently completed 800G fiber route spanning from Denver to Omaha, Des Moines and Chicago. This route provides readily available capacity options for organizations looking to leverage on-demand, innovative technologies that span 5G, IoT, AI, AR, cloud gaming, and beyond. Arelion performed successful field validation tests from the 1623 Farnam data center late last year and is now providing general availability of

The new route utilizes transponder systems with coherent lasers and detectors capable of transmitting 800G waves across the system, which can be broken down into smaller bandwidth interfaces such as 400G, 100G, and 10G according to customer capacity requirements. This, along with 1623 Farnam's robust connectivity ecosystem, strategically centralized location, and an array of trusted data center services,

TD

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helps tenants in the data center utilize the latest technologies with competitive commercial costs and a greater availability by avoiding supply chain challenges using multiple supplier options on the open line system.

"Customers that are looking to digitally transform need ample network capacity for their applications and systems to thrive -- and it's clear we have a tremendous amount of capacity in Omaha. At 1623 Farnam, we're proud to offer access to Arelion's leading global backbone," comments Todd Cushing, President, for 1623 Farnam. "Many vendors are dealing with 25-30 week lead times, and people don't have that kind of time anymore. We have the capacity available and ready to go. As an edge expert and a connectivity connoisseur, we're glad that we can continue to improve our ecosystem with wonderful partners and tenants, creating a rising tide that lifts all boats."

Those interested in learning more about how 1623
Farnam can support their connectivity and cloud
requirements can check out the latest developments on
1623's Blog. Follow 1623 Farnam on Twitter and
LinkedIn. Visit www.1623farnam.com or email
info@1623farnam.com for a consultation.

About 1623 Farnam

1623 Farnam is the leading network interconnect point providing secure direct edge connectivity to fiber and wireless network providers, major cloud and CDN properties, content providers and Fortune 500 enterprises. We support mission-critical infrastructure and applications with the highest levels of availability, enabling maximum levels of application performance. As the regional leader in network-neutral, edge interconnection, 1623 Farnam offers access to 50 network companies which have local, regional, national and international reach. Located in the heart of the Midwest, 1623 Farnam services over five million eveballs and multiple Fortune 500 companies in our region. Nebraska is the 15th fastest growing tech state and 20th fastest population growing state in the nation. We pride ourselves on consistently earning high customer satisfaction scores resulting in customer peace-of-mind.

For more information, please visit www.1623farnam.com.

About Arelion

Formerly Telia Carrier, Arelion is a leading light in global connectivity services. We've been keeping the world connected since 1993 and today our global IP backbone, AS1299, is ranked number one in the world. Our network spans Europe, North America, and Asia with 70,000 km of optical fiber and 1,700 MPLS endpoints. Our award-winning customer service team supports our expansive customer base, who rely on us for their business-critical services. Discover more at www.arelion.com and follow us on LinkedIn and Twitter.

View original content to download multimedia:

https://www.prnewswire.com/news-releases/arelionupgrades-capacity-and-launches-expanded-capabilities-

at-1623-farnams-interconnected-edge-data-center-inomaha-301478571.html

SOURCE 1623 Farnam, LLC

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mcarpo@engagepr.com

(END)

co televk : Telia Company AB

IN idcent : Data Centers/Colocation Services | icargo :

Freight Transport/Logistics | i8394 : Computer Services | ibcs : Business/Consumer Services | idserv : Data Services | itsp : Transportation/Logistics | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile

Telecommunications

NS cprdop : Facility Openings | c22 : New

Products/Services | ciexp : International Expansion (Facilities) | cscm : Supply Chain | npress : Press Releases | c24 : Capacity/Facilities | ccat :

Corporate/Industrial News | cexpro : Products/Services | ncat : Content Types | nfact : Factiva Filters | nfcpin :

C&E Industry News Filter

RE usne : Nebraska | namz : North America | usa : United

States | usc : Midwest U.S.

PUB PR Newswire Association, Inc.

AN Document PRN0000020220209ei29000iz



HD DNA, Telia Finland joint venture Syv extends 5G network to Punkaharju and Parikkala

WC 157 words

PD 8 February 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Finnish operator DNA said its Syv joint venture with Telia Finland will develop its **5G network** construction in February in Punkaharju, now part of the Savonlinna municipal district, and in Parikkala. Alongside the new **5G network**, 4G connections in the region will be improved, too. Upgrade work at base stations will begin on 14 February and is scheduled for completion by 12 March.

During the engineering works, 32 base stations will be upgraded in Parikkala, Punkaharju and the surrounding areas. Base station replacement work will be done in Rajavaara in Kitee, and in Parikkala, there will be upgrades in Kesusmaa, Kirkonkyla, Koitsanlahti, Kolmikanta, Maironniemi, Melkoniemi, Mikkolanniemi, Niukkala, Otrakas, Särkisalmi, Tarnala and Uukuniemi.

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In Ruokolahti, the engineering works will affect Sarajarvi. In Savonlinna, upgrades will be done in Enanlahti, Hiukkajoki, Kiviapaja, Kokonsaari, Kommerniemi, Kosola, Kultakivi, Laukansaari, Piojarvi, Punkasalmi, Ruhvana, Saukonsaari, Siltamaki, Soilukka, Sarkilahti and Vuoriniemi

dnafin : DNA Oyj | televk : Telia Company AB | tvk : Telenor ASA

idct: Digital Cellular Technology | i3302: Computers/Consumer Electronics | i3303: Networking | itech: Technology | iwrlssl: Wireless Area Network Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications

NS ccat : Corporate/Industrial News | c184 : Joint Ventures/Consortia | c18 : Ownership Changes | cactio : Corporate Actions | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE fin: Finland | eurz: Europe | eecz: European Union Countries | nordz: Nordic Countries

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AN Document TELEUR0020220208ei28000e0

HD Q4 2021 Fabege AB Earnings Call - Final

WC 5,688 words

PD 7 February 2022

SN VIQ FD Disclosure

sc FNDW

LA English

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LP

Presentation

STEFAN DAHLBO, PRESIDENT & CEO, FABEGE AB (PUBL): Welcome to the presentation of our year-end report 2021 today besides our CFO, Asa Bergstrom, as you know very well since before. We also have our Head of **Sustainability**, Mia Häggström, here. So welcome.

TD

Before I will summarize the strong -- we will summarize the strong full year 2021, I want to say a few brief words about the fourth quarter. It was a quarter with a good level of activity, both in the rental market, but also in the transaction markets. There were many inquiries and it was many viewings. We see that the positive trend also is continuing into the Q1 (inaudible) for 2022. Net lettings came in for the fourth quarter at SEK 22 million, and it was a good result. We will tell you more about that later. The most important event was our strategic -- was maybe our strategic acquisition of SHH, although we talked to you and we mentioned that already in the Q3 presentation.

But change slide. Then despite the pandemic, the COVID-19 situation, 2021 was a very good year both for us at Fabege, but also for many of our customers. Net lettings was at record level, almost at record level, SEK 162 million for the whole year. It is one of the best years ever. And considering what unusually 2021 was, with the restrictions back to normal, new restrictions at the end of the year and all that, I think 2021 is a strange year, but it was a really excellent performance by our organization. The year was also characterized by rising share price, record low interest rates, capital -- and capital, almost (inaudible) looking for -- seeking returns, all that you know about. And that also was, of course, it was seen in the transaction market, both in the -- for all real estates in Sweden and other countries still, of course. And we see also how the current property real estate companies are being valued by the stock market and some of us have some of the company has been valued significantly over the net asset value, which is not that normal situation. For us, it's also therefore extra important to have total focus on our transactions and what we can influence over -- and the most important, maybe, is to have focus and not forget about the daily operation.

We have our basis the business -- the basis of our business lines and the management of properties with today is a combined value of around SEK 83 billion. Every day, we have to take care of our -- careful and further developed our portfolio. It's a daily grind with many small and larger details, but it's also what generates long-term results and growth.

So please, Asa, tell us a little bit more about the figures and the results.

ASA BERGSTROM, VP, CFO, COMPANY SECRETARY & DEPUTY CEO, FABEGE AB (PUBL): Thank you, Stefan. Please turn to Page 5. It was, as Stefan just mentioned, a strong close to the year as expected. Higher income, improved net operating income and profit from property management. For the first time, a quarter from SHH is also included. SHH is mainly reported on separate lines in the income statement and has its own segment in our segment reporting.

Rental income came in at almost SEK 3 billion, slightly higher than the previous year. In an identical portfolio, income increased by 2%. Vacations ahead of projects and granted discounts were offset by occupations in completed project properties. The increased operating expenses were due to a more normal winter in terms of cost for heating and snow clearance, but the surplus ratio still improved to 76%. SHH gross profit amounted to minus SEK 9 million, of which SEK 19 million related to central administration costs. Income recognition takes place in connection with the completion of the projects, and we estimate that the costs are a little front-loaded. And now, approaching 2022, we will review the methodology for distributing the costs in the ongoing projects.

Central administration includes nonrecurring costs of approximately SEK 11 million relating to the move and furnishing of our new headquarters in Solna. Interest expenses increased slightly compared to the previous year, which is due to an increased loan volume. The average interest rate fell slightly during the year to 1.75% from 1.77% last year. And the result in associated companies amounted to plus SEK 2 million, the year's contribution to Arenabolaget of minus SEK 35 million was offset by a positive final recognition of SEK 25 million relating to our joint venture project Selfoss in Kista and also SEK 12 million relating to final recognition of housing development projects in SHH. And we, therefore, reported profit from property management of just over SEK 1.5 billion.

The strong property market is reflected in continued falling yield requirements and positive value changes. In total, the year's unrealized changes in value amounted to SEK 4.6 billion, of which SEK 2.2 billion were recognized in Q4. And the yield requirement fell by 12 points during the year to 3.76% at the year-end. The deficit value in the derivatives portfolio decreased further during the quarter and by SEK 532 million in total during the year. And finally, the tax expense amounted to minus SEK 1.3 billion and related to deferred tax only.

Please turn to Page 6. Reported equity increased by SEK 14 per share to SEK 141 per share, and the long-term asset -- net asset value, the EPRA NRV, amounted to SEK 171 per share. The only key rate that does not currently meet our target level is the debt rate year, which amounted to 14.7%. Otherwise, the key ratios are in line with our goals and expectations. Our balance sheet is still very strong with a high-quality asset ratio and low loan to value ratio.

Please turn to Page 8. On the financing side, we do not have so much to report. The strategy of loan capital maturity and the high proportion of fixed interest terms remains unchanged. We maintain a reserve of unutilized facilities in the form of revolving credit facilities of just over SEK 3 billion. Unfortunately, the proportion of green loans slipped back to 99% after the acquisition of SHH, whose loans are not classified as green loans. However, this is something we intend to change during 2022. Both the capital markets and banks have been there for us during the whole year. We have continued to be active in the capital market through several bond issues and regular issues and sales of commercial paper. We have also refinanced bank loans according to plan. We have also taken the opportunity to fix the interest rate through new long-term interest rate swaps. Of the loan portfolio, 76% is now fixed, mainly based on long-term maturities and mostly through straightforward interest rate swaps, supplemented by some fixed rate bonds.

Maturities are continually replaced by new long-term fixed rates. During the fourth quarter, we reactivated our share buyback program. In total, we repurchased 4.9 million shares during the year, and we currently hold almost 9.5 million treasury shares. The shares have been repurchased at an average price of SEK 122.05 per share, and we will retain these treasury shares until further notice.

Please turn to Page 9. We aim for an even distribution of our loan stock among several sources of financing, as you can see in the graph on the left. Other loans in the chart, apart from bank loans in the Nordic banks, also referred to loans from Brunswick and the European Investment Bank. And the proportion of assets free from collateral or mortgages or unencumbered assets, as they are called in the rating agency terminology, has increased to 44%.

And by that, I leave over to Stefan again.

STEFAN DAHLBO: So Slide #11, please. As you know, we're only 94 properties, but it's a property value of more than SEK 83 billion. It's well-located modern properties. And I think that will be even more attractive in the future. One effect of the pandemic will be that the customers will demand -- maybe even continue to demand high quality, but they will also demand flexibility. And that's something we all have been talking about since 2 years since the COVID-19 situation started. We have a total model portfolio. We have, as we said, in our attracting locations with very good communications. This will -- I'm sure this will benefit us. The value growth for 2021 was very good. We have, today, average yield requirements of 3.76%. However, we -- the transactions that has been done, as you know, we value the portfolio every quarter with external value of about 25%, 30% every quarter as we also did for Q4. And the transaction market has been very strong when the -- even for commercial. There have been very few transactions in the office market in Central -- in the CBD and Stockholm. There were some transactions at Q4, and they were at a low level of 3%. So in the valuations, I think we saw a downturn, but I think there is still some time lag in the valuation in the market or maybe the market was -- we have seen the peak.

Next slide, please, #12. As you know, we have a very stable customer base. We have long leases with some of Sweden's largest companies and more stable companies, SEB, ICA, Telia, Swedbank, Carnegie and so on and so on. I think this is really a strength for us. And the new lease agreement with Alfa Laval in Flemingsberg was 20 years -- 22 years lease. I feel very comfortable -- confident about our customer structure.

We can see a small tendency that smaller company are now a bit more inclined to be for shorter lease terms than they did before the COVID-19. But for larger clients and customers, a long-term approach is important and that's also what we continue to see. And Alfa Laval is a very good example of that.

Please go to the next slide. We sometimes forget the portfolio. We have a large portfolio in the Stockholm CBD or inner city is. We have a third -- we are the third largest property owner, with 27 properties with a value of more than SEK 30 billion. With our Stockholm focus, it's -- of course, it's natural for us to own attractive properties in the Stockholm inner city. It's there the new trends are born, the rental levels are high, vacancies are sort of few and the cash flow is stable. And there's also advantage to be able to offer -- for us it's an advantage to offer -- to be able to offer premises, both inside and outside of the city. For example, in Solna, Hammarby and in future, Flemingsberg. And during the year, there has been an unusual opportunity for us to get to some area for new productions in the inner city. And thanks for the land to our land location at Sveaplan, we now had the opportunity to go forward to build maybe 8,000, 9,000 square meters offices at Sveaplan close to the Wenner-Gren Center where we see here in the picture. But it's a project that will take some years to start.

Next slide about Hammarby Sjöstad. We are the biggest in the office market in Hammarby Sjöstad. We have 11 properties with a value of more than SEK 8 billion. And looking ahead, Hammarby has only -- is also halfway in its development. 30 or 40 years ago, this was an industrial land for old industrial companies, so it has been developing fantastically during the last 40 years, and we'll continue to increase that creativeness as the district is linking up in a natural way within Stockholm inner city and -- but also the global area will continue to be developed. During the year, we have even here obtained some land [notifications]. We have in total development rights here for more than 70,000 square meters of offices.

Next slide, Arenastaden. As you know, we are #1 here. We have developed most of the area. We owned Friends Arena. You can see it, the one you see to the left. And during the year, 2021, we have completed 2 larger projects, both the hotel and the lower part of this picture, the Nationalarenan 3. And also, where we have our new head office in the middle of the picture, where we have almost let up 100%. But we see -- and we see a strong demand in -- for new premises in Arenastaden. One example of this is when clearly exercised an option to lease some areas, it didn't take long before they say as well let to new customers at very good levels. In this quarter, the Q1, the Poolen 1 project will also be completed and TietoEVRY will move in, in that building.

Next slide, please. Haga Norra, one of our development areas. The property value is about SEK 3 billion today. We are now entering into next phase, Phase 2, for development. We will start building office space, the one you see in the middle here for the 30,000 square meters of offices and also preparations and starting to construct more than 400 new apartments. And also, garage and so on. I will come back a little bit later to this project.

Next slide, please. In Solna Business Park, which we have been owning now for about 15 years. Then even here, the next phase for development will start. In 2022, we were to make the ground floors in the area more attractive. When the area was built in the 80s, it was adaptive for heavy traffic with a lot of loading docks and loading/unloading -- and unloading areas. Now during 2021, we have worked to remove these, and now we're taking the next step to improve the area's attractiveness. We will also start new progress here. Since we are the largest property owner in the area, we have the possibility to work with the entire area in order to boost its attractiveness and its development. This is one of the many advantages of having a concentrated portfolio and being a large player in each market. It will also -- the future development in Solna Business Park, we will also include a lot of residentials.

The next slide, please, Flemingsberg. In the south of Stockholm, we took several large steps forward during 2021. We have started our first project with the construction of the Royal Opera and the Royal Dramatic Theatre. We will -- it will -- that building will be ready in 2024. We have obtained even here land allocations from the Huddinge -- city of Huddinge, which will enable approximately 225,000 to 325,000 square meters of development rights. And that includes 30,000, 40,000 square meters of residential and the rest is commercial floor space. At the end of January, we will also -- we also acquired a development property from Skanska, which includes another approximately 35,000 square meters of commercial floor. So now we have control of most of the development in the area. And I think that's an advantage to be really strong and to be able to work close to the city of Huddinge to develop this area.

And as you know, during 2021, we signed Sweden's largest new letting with Alfa Laval. They used Flemingsberg for its future establishment. The lease is for 20,000 square meters and is for 22 years. So there were also a lot of several initiatives to be part of the development in the whole area, a few social initiatives to strengthen Flemingsberg. But me, I will tell you a little bit more about that later on in the presentation.

So next slide, where we will delve a little bit about the rental market. So on Slide 20, please. The rental market in recent years has been, as you know, very strong, and you know how the rents has almost

doubled since 10 years -- during the last 10 years. We don't hear the rumors right now about new record levels. I'm sure, we -- actually, during the year, we signed new record levels, a small space -- some small space in the city (inaudible) for us, but it were only for 300 square meters for more than SEK 9,000 per square meter. But it's a very stable market in general. So we don't see any trend that rents are falling. It's a good demand, especially in the CBD, but also, as we said before, in Arenastaden. So we would say that we have more level of -- rent level at high levels in the inner city, while in our other areas, we can see continued increase but at more moderate rate than before. But even if the rents have gone up, it's also important to remember that premises costs are generally just under 1/10 of the wage costs for the companies (inaudible). This means that many companies are focused on the signing office so that they really can be an attractive place to be in. And I think this -- we have only seen the start of the new step for this.

Next slide, please. As we said, we had very good net revenue for the full year. SEK 162 million is one of the strongest years ever in net letting for us. In the -- in the graph to the right, you can see the development of contract rental income, including new occupations, relocations and renegotiations for the last years -- or for the last year. This is not a forecast -- aim for 2022. This is not a forecast but aims to show that the rental trend in existing contract portfolio as of closing day known what we know today. So we know -- but here, you can see that we have -- we know that Skatteverket, for example, will leave some premises in during the beginning of this year, and that was announced already January 2019.

Next slide, please. Renegotiations. Very strong year even here, up 11%. It will be difficult to achieve an equivalent increase in the renegotiation for the coming year and years. But this is partly due to the fact that this is where we negotiated in 2022 -- we will renegotiate in '22 where previously we negotiated only 3, 4, 5 years ago and from high level at that time. And so the rental levels are unchanged now. So the gap to be -- the existing leases in the portfolio is getting smaller for the next years. But what is good for us but -- is that the index adjustments for this year will be 2.8%. So we had -- we can add another 2.8% for all our contracts. But of course, we have some impact on how to negotiate the renegotiations. And also, the new property tax assessment will mean that the property tax will probably increase significantly. And this will have some -- also has some impact on renegotiations. But -- so some lower levels, but a very strong market in total. You can also say here maybe that the energy cost can have some short-term impact on how the winners from some companies. But as we said, we're still quite -- we're still optimistic.

What we had to work with is on the next slide, Slide 23. We have to work with our vacancies. We have some opportunities. We have some -- I don't see any, as I said before, no structural vacancies in the portfolio. But especially in Solna Business Park, we have some vacancy to work with. We have some smaller one in the CBD, where we have more. But -- so we also strengthened the team working with lettings to be able to take -- use this opportunity for -- to -- especially maybe the challenge within Nöten -- or the opportunity in Nöten 4 that were scattered like living in Solna, which we have to work harder for the next. But there are some opportunities in the (inaudible), but we reduced the vacancy.

A little bit more about the future projects on the next slides. So go please to Slide 25. Here, you can see the vacancy -- how the vacancy rate and the office stock in Stockholm for the last 15 years. The office stock has increased a little bit more than 10%, well -- and the vacancy rate has decreased. But it hasn't been -- the reason why the office space in Stockholm hasn't grown more is also some office properties have been converted into housing and hotels. So what we see in Stockholm now is it's difficult to find new and attractive land for office in good location, especially in the CBDs. Solna, we have some opportunities left in there. There are some continuing to develop. And there's some more opportunity in Arenastaden close to the inner city. And then, of course, south of the city, especially in Flemingsberg, now we are fond of.

Next slide. For the next -- for the year -- we have also seen for the last 15 years a growing office employment, number of office workers in Stockholm. And we think this will continue. There is a good demand for finding -- for more -- it's good for risk to continue to grow. So -- and it has grown faster than supply. But of course, it also means that we are more -- we have been more efficient in their offices.

But next slide. Our own properties we should see in the light of what we said before. We have a huge project potential. Last year, we invested almost SEK 1.9 billion. I think we will end up 2022 more -- a little bit higher, maybe SEK 2.3 billion to SEK 2.4 billion in investments. So that's what we were expecting for next year.

Next slide, please. Here, we have some details about our project portfolio. They're ongoing. And as you know, we have about 59,000 square meters under production, and we have signed contracts or (inaudible) 85% of this.

Next slide. So what about the future? On page -- Slide 31, we have some large available right portfolio, as you know. This means that we have a great potential to start both commercial and housing development projects in the coming years. In total, it's almost 1.5 million square meters. Of course, it's much -- a lot in Solna and a lot in Flemingsberg in both the residential and the commercial side.

Some examples, Slide 32, please. In Haga Norra, the construction, it will -- for the next step, we'll start in 2022. It will be an office block, housing and garage. The office block, at the building #1, is planned to be ready for occupation in early 2024. And we have -- it's about a little bit more than 30,000 square meters of commercial area. We will start in 2022. We have no signed contracts. We normally we like to have an anchor tenant, which take a large part of the area before we start a new project here. We have started because we think it's -- we have strong demand for good offices and it will be a multi-tenant tower. We are creating a high-quality office project in a very pleasant neighborhood. So we started and we'll work it. So I think this will be a very attractive building in a very attractive area.

June 2022, we will also start, as you can see on the next slide, the development project of, as we say, is Swedish Nöten 4, where we have the Swedish Tax Agency leased during the second quarter. We will convert a property from a single tenant building into multi-tenant one. The goal is to have the first new customers here and so they can move in during 2024.

Next slide, SHH. Also have a lot of projects going on and a lot of projects that they will start. In Tumba, south of Stockholm, south of Flemingsberg or close to Flemingsberg, SHH will start its project to date. It's a joint venture with Balder. In total, it will be almost 1,000 apartments that will be produced over some years, and it will be a mix of rental apartments and tenant-owned apartments. SHH will also start projects in Flemingsberg of about 260 apartments or even there will be a mix. They have some other projects going on in the south of Sweden and in the Stockholm area. And also, we will probably started a [primary school] in south of Stockholm. So a lot of projects even going on there. And as you know, we have a lot of projects in total in the portfolio. So they are now more integrated in the whole group.

Slide 35, in Flemingsberg. We will now start the construction of Alfa Laval complex, the building of more than 20,000 square meters in total investment of more than SEK 700 million. We have very -- during the year, we also have several exciting progress will continue. As we said (inaudible) we will return -- tell you more about this during the next -- during this year and the next presentations and other meetings we would have with you.

So with that, I will hand over to Mia to tell you about all the work we do in this sustainability, right? Please, Mia

MIA HäGGSTRöM: Thank you, Stefan. It is great that sustainability is now also on the financial markets agenda. For us as a long-term actor and builder of communities, the 17 sustainable development goals have been something natural for a long time. We committed to the science-based target initiative in 2019, which means that our targets are now aligned with the Paris agreement. Sustainability is a prioritized part of our business operation and is integrated into target plans across the entire group.

Next slide, please. For us, it's important to think sustainability in everything we do. As you see in the slide, we have made good progress, even if there is a lot left to do. We estimate and report both direct and indirect emissions. Now we are aiming for climate-neutral management by 2030, Scope 1 and 2, and 50% reduction in indirect carbon emissions, Scope 3, by 2030. These are tough but not unreasonable targets. But first and foremost, achieve a 50% reduction of Scope 3 requires courage, new thinking, and of course, curiosity.

Turn to Slide 38, please. Our sustainability building in Haga Norra is a great example of how we are not afraid to test new possibilities in order to achieve a 50% reduction in the indirect climate impact. Instead of throwing away all the usable demolition materials in Bilia's old facility, we will essentially construct a new building from the old one. We will learn more from this about what is possible in the recycling field. This is a really exciting project, not only for us but for the entire industry. Joists rebuildings, constructing houses from houses, we'll make heavy structural building parts available, especially loaded barrier, structures and facades for reuse in new construction and refurbishment.

Please turn to Page 39. During this year, we put extra focus on social sustainability and worked and planned to reduce in equality in the areas where we are operating with Flemingsberg in focus. We want to help ensure that children and young people get good schooling, meaningful leisure time, and by extension, of course, the pathway into the labor market. We believe that it contributes to creating pride for us as employers, that it is an important question of responsibility for us as a property development. And of course, it creates value for us and the society as a whole. In Flemingsberg, among other things, we have initiated collaboration with the Läxhjälpen Foundation, and with Talent Academy, with the aim that more students should achieve upper secondary school competence and that more internships and jobs are created. Thank you.

STEFAN DAHLBO: So thank you, Mia. And I think it's really -- I'm really pleased that these questions are high up at the agenda and the development over the last years has been -- a lot of good steps have been taken in many companies, I think, in the whole financial market we're talking about sustainability. I think it's been very important for us to have ambitious targets to continue to develop and be active in what we can

have impact on. I think it's very important for us to work with those social initiatives, but we really can make difference out in the different areas. We can really make difference on a daily level for many people. We can -- and that will be, of course, make values for the community, but also for us as shareholders. I'm also happy to say that we, in January, was -- have been ranked as one of the best companies when talking about gender equality. So a lot has been done. A lot has to continue to be done, and we have to change to work with this together, all of us. So with that, please, questions.

Questions and Answers

OPERATOR: (Operator Instructions) The first question we received is from Jonathan Kownator, Goldman Sachs.

JONATHAN SACHA KOWNATOR, FINANCIAL ANALYST, GOLDMAN SACHS GROUP, INC., RESEARCH DIVISION: First topic I wanted to come back to was occupancy. Obviously, you've highlighted in the presentation that you are expecting some leases to start, I think. Particularly for Telia, if I understand, so that should improve occupancy, but at the same time, you're losing income on the Swedish tax authorities. So how do you expect occupancy to evolve in the next few months based off your Slide 21, which shows the profile of income that you're expecting? I think that's my first question.

The second question being on dividend, obviously, you've put a big increase there. That corresponds, I think, now to 95% of your EPRA earnings which is an increase effectively in payout ratio from the previous one. So how are you expecting that, particularly in the context of your future investments in the pipeline?

STEFAN DAHLBO: I'm not sure if I really can hear you clearly. I think the first one about the -- about occupancy rate when the Telia building is new contracts and the tax authorities when they're leaving. So the easy answer it will be about flat. No big deal. And the second one is, was it about the dividend and how it

JONATHAN SACHA KOWNATOR: Yes. About dividend policy going forward, if we expect increase in the payout, which is about 5% of your earnings.

STEFAN DAHLBO: The broad and our view is that we have a very strong balance sheet. We have a dividend as one tool to -- for shareholder value, and we have the share buyback program, and we can have all the projects go. We have a strong balance sheet, so that's why also we see this increase in the dividend.

ASA BERGSTROM: And financing is not an issue. So capital is very available for us.

JONATHAN SACHA KOWNATOR: Should we effectively see that as releveraging to effectively, say, distribute money to shareholders? So what would be your target LTV then from that perspective?

ASA BERGSTROM: Well, the target LTV is not -- has not changed. We have always -- or at least, for many years now communicated that LTV should not be above 50%, even in the worst of times. And of course, now, we are in good times and an LTV of 36% gives us good headroom to increase the dividend. So there is no conflict with the LTV target.

STEFAN DAHLBO: And no conflict with future products neither. So it's a sign of strength, you could say.

OPERATOR: (Operator Instructions)

STEFAN DAHLBO: If there are no further questions on -- it was quite a long presentation, so -- you also know that you're always welcome to give us a call or to mail us or to discuss or to make questions and so on.

ASA BERGSTROM: Thank you for today.

STEFAN DAHLBO: So thanks for today. Have a nice evening.

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HD Cleveron delivers automated service point and shop for Telia Estonia

WC 250 words

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LP

Estonian technology company Cleveron announced its support for Telia Estonia in developing a digital self-service shop. From the automated service point, customers can receive Wi-Fi routers, handsets and other **devices** as they would from a regular shop, while the digital representative office reduces business premises costs and the customer service staff can be located hundreds of kilometers away.

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The smart shop concept consists of Cleveron's smart service screen, two robotic parcel handover solutions, and an exterior pod, making it suitable for indoor and outdoor use. The system is easy to use and very similar to the physical shop concept, the company said. The customer enters the digital shop, then calls the sales representative via the service screen and identifies oneself. The customer service specialist advises the customer, and if a new device is needed, the customer pays for the device as in a self-checkout. Within seconds, the customer receives the goods from the Cleveron parcel robot, located inside the digital shop. The robot is prefilled with the most popular and necessary products, just as the regular store would have.

The new self-service shop concept continues Telia's project of finding cost-effective solutions for its retail chain. As the first step, in May 2021, Telia opened the first indoor digital shop at a shopping centre in Estonia. After a successful pilot, the project continued and Telia opened the new automated service point in December 2021.

co televk : Telia Company AB

iwrlssl: Wireless Area Network Technology | i3302: Computers/Consumer Electronics | i3303: Networking | itech: Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications

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HD Telia named the most environmentally friendly company in Lithuania

BY Irma Jančiauskaitė

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LP

Vilnius, February 3 (ELTA) – Telia Lietuva has been named the most environmentally friendly company in the large enterprise category by the National Responsible Business Awards (NAVA). The company was recognised for its sustainable business decisions and responsible supply chain design, reports the telecommunications company.

"We have identified environmental protection as the core area of our sustainable business operations, and have set ambitious goals in relation to environment which are pursued by the whole Telia Company Group. Our staff members, suppliers and partners – existing as well as new – are engaged in the pursuit of these goals. The evaluation by NAVA is an important confirmation that we are moving in the right direction. At the same time, it is a firm commitment to continue this journey of sustainability," said Aurelija Žėkienė, Head of Quality, Processes, Occupational Safety and Environmental Protection Team at Telia Lietuva.

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The NAVA Awards recognised Telia Lietuva significant contribution to environmental protection. Telia Lietuva operations are already climate neutral with special carbon dioxide (CO2) offsetting mechanisms and green energy, which accounts for 100% of the company's electricity consumption. Green energy is also used by Telia Lietuva data centres, which have modern energy-efficient cooling equipment. As a result, about 575 tonnes of CO2 are saved annually – equal to the amount of CO2 emissions produced by 130 vehicles a year.

Other sustainable innovations introduced by Telia Lietuva last year were also taken into consideration. Telia Lietuva was the first in the market to introduce refurbished phones, which are thoroughly inspected by specialists before being returned to the market; it also launched the Eco Rating initiative, which evaluates the environmental impact of push-button phones and smartphones, and adopted a number of other measures.

Telia Lietuva also urges all its suppliers and partners to choose sustainability. Last year, special workshops and consultations were organised to help companies focus more on monitoring CO2 indicators and emission reductions, as well as solving other environmental issues.

"The entire Telia Company Group bases and measures its environmental ambitions on the Science Based Targets initiative. It is important to us that our partners choose and follow this path as well. As an international company, we measure results and changes in results on a group-wide basis. For instance, seven out of ten of our suppliers who produced the greatest amount of carbon dioxide in the supply chain have identified – or committed to identify – science-based targets. This is a significant achievement, Žėkienė said.

NAVA is a public initiative which has been implemented in Lithuania since 2008. It aims to raise awareness of the benefits of corporate social responsibility for businesses, the country and every individual, and promotes companies to embed the principles of social responsibility in their operations. It also fosters good competition among companies; not for profit, but to increase their social responsibility. Since 2013, the awards have been organised by the Ministry of Social Security and Labour, the Ministry of Economy and Innovation, the Ministry of Environment and numerous social partners.

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HD Survey: 13 pct of Estonian companies changed their business direction due to pandemic

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TALLINN, Feb 02, BNS – The results of a survey commissioned by telecommunications company Telia and conducted by pollster Turu-uuringute AS shows that 13 percent of companies reorganized their operations or changed their business direction due to the pandemic.

Almost half of the companies in Estonia made significant changes due to the pandemic, including raising the level of **cyber** security, introducing additional measures to enable teleworking, making changes in the sales chain or even changing the business direction, Telia said. A fifth of large companies and 14 percent of companies with 20 to 50 employees had to make changes to their sales chain or software.

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Holger Haljand, head of corporate customers at Telia Estonia, said that companies were asked what changes they had to make as a result of the pandemic, and as expected, the main impact of COVID-19 has been the introduction of additional measures to enable and improve teleworking.

"Enabling remote work has been one of the priorities for companies both at the beginning of the pandemic and now, and 35 percent of companies had to make related changes," Haljand said.

Haljand pointed out that companies with a larger number of employees have made more changes, one of the clear directions of which has been security during the pandemic.

"While on average a quarter of companies have raised their cyber security level due to the pandemic, half of large companies have done so," Haljand said, adding that interest in cyber security solutions has clearly increased in recent years and the level of cyber security has improved significantly over the year.

"It can be said that Estonian companies have adapted well to the new situation, but there are definitely areas that are more affected by the pandemic, and changing the business direction may be a necessary step to continue doing business," he added.

Companies were asked to rate their current level of digitalization and the average score on a five-point scale was 3.7, which means that the level is predominantly assessed as satisfactory or rather good.

"The coronavirus crisis gave a strong impetus to the technological development of Estonia and the rest of the world. Although, in essence, several years of work was done in a few weeks at the beginning of the pandemic, it is crucial for the development of Estonian companies that vigorous digitalization continues. It is gratifying to see that companies understand this need by providing realistic estimates of their current level of digitalization," Haljand said.

During the survey, phone interviews were conducted with representatives of 300 companies. The sampled companies were divided into three groups in terms of the number of employees: 5-19 employees, 20-49 employees and 50 or more employees. The survey took place at the end of last year.

Tallinn newsroom, +372 533 38403, majandus@bns.ee

Baltic News Service

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS gtcom : Telecommuting | gsars : Novel Coronaviruses | gout : Outbreaks/Epidemics | nstacs : Statistics | nsur : Surveys/Polls | ccat : Corporate/Industrial News | gbal : Work-Life Balance | gcat : Political/General News | gcold : Respiratory Tract Diseases | ghea : Health | gjob : General Labor Issues | glife : Living/Lifestyle | gmed : Medical Conditions | gspox : Infectious Diseases | ncat : Content Types

RE estnia : Estonia | baltst : Baltic States | eecz : European Union Countries | eeurz : Central/Eastern Europe | eurz : Europe

IPD business

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SE Corporate Financing Week

HD Industry Trend Analysis - Quick View: Telia Sweden's Tower Sale Pushes Forward

Streamlining Strategy

WC 533 words

PD 1 February 2022

SN Corporate Financing Week

SC CFWK
LA English

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LP

The Latest: Telia has sold 49% of its tower business in Sweden to **investment** managers Brookfield and Alecta. The deal follows up on a partnership between the same parties in 2021, whereby Telia sold a 49% stake in its tower assets in Norway and Finland. Subject to regulatory approval, the deal values Telia Sweden's tower portfolio at SEK11.22bn (USD1.2bn).

Implications: Telia, like most of the large telcos operating in Europe, is capitalising on the growing investor appetite for digital infrastructure. For Telia, the costs of maintaining and expanding its tower base are a hindrance for the company's growth ambitions. In particular, higher energy costs have taken a toll in the EBITDA recorded by the company across markets such as Denmark, Lithuania and Finland.

TD

Meanwhile, investment partners such as Brookfield and Alecta are increasingly attracted by the steady and predictable cash flows that arise from the often inflation-linked contracts of tower businesses. The divestment of Telia's tower assets falls in line with the company's overarching strategy to offload capital-intensive assets and streamlining its operations. Other examples of the operator's strategic initiatives include the sale of Telia Carrier to Polhem Infra in Q221 and the sale of its Latvian B2B business to domestic provider Tet in Q122. In recent years, the company has recorded modest growth, which has spurred the decision to transfer the net proceeds from the tower deal to shareholders.

Telia's Asset Rationalisation To Address Bottom Line Concerns Telia - Selected Financial Metrics, 2018-2021



<TD>Source: Telia, Fitch Solutions

In the context of the Swedish telecom market, Telia's competitors had already taken steps to crystallise the value of their passive infrastructure. In June 2021, Telenor established Telenor Tower Holding, which encompasses the company's 40,000-plus tower sites portfolio in Denmark, Finland, Norway and Sweden. In November 2021, Telenor sold its wholesale fibre unit to a digital infrastructure firm. In January 2021, Spain-based towerco Cellnex closed the acquisition of CK Hutchison Tre's tower sites in the country, which included a total of 2,650 sites. At the time of writing, challenger Tele2 has yet not specified plans for its passive infrastructure assets, though we expect the company to follow suit in the short to medium term.

What's Next: According to Telia, the operator will be adding new assets from several of the markets where it operates to its infrastructure JV in the coming quarters. 5G expansion will

continue to be one of the operator's priorities to grow mobile ARPU and stabilise customer churn through convergence with high-growing segments in the market, such as fibre and TV.

Looking forward, we expect Telia to benefit from the transaction via reduced operational expenses as well as through lower capex related to cell coverage expansion. Meanwhile, Tele2 will likely announce similar infrastructure divestment plans in the short to medium-term, as the Swedish market conditions - namely, stagnant subscription growth and a small addressable market - will push the operator to follow the steps of its competitor to stay ahead in the highly competitive market.

co televk : Telia Company AB | ckh : CK Hutchison Holdings Limited | ntcoms : Tele2 AB | tvk : Telenor ASA

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | i8396 : Diversified Holding Companies | ibcs : Business/Consumer Services

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SC EMDN English

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SE Western Europe Telecommunications Insight

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WC 534 words

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SN Fitch Solutions Industry Research Reports

SC BMIAA LA English

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FreeMove Alliance and Millicom cooperate to better HD serve Multinationals across the Americas WC 690 words PD 31 January 2022 14:00 ET PR Newswire SN SC PRN **English** LA CY Copyright © 2022 PR Newswire Association LLC. All Rights Reserved. LP

PARIS and LUXEMBOURG, Jan. 31, 2022 /PRNewswire/ -- FreeMove Alliance, the global mobile telecommunications alliance between Deutsche Telekom, Orange, Telia and Telecom Italia, and Millicom, a leading provider of fixed, mobile and digital services in Latin America serving enterprise customers through its Tigo Business brand, announced today that they have signed a partnership agreement to offer seamless connectivity solutions to multinational customers (MNCs) across the Americas and beyond.

The new partnership will expand FreeMove Alliance's reach in Latin America, adding Millicom's eight mobile communications markets: Bolivia, Colombia, El Salvador, Guatemala, Honduras, Nicaragua, Panama and Paraguay to its network of already more than one hundred markets worldwide. The cooperation will prove valuable in particular to T-Mobile US and TIM Brasil, both FreeMove Alliance members whose multinational customer bases are regularly doing business across the Americas.

"The strategic focus of FreeMove Alliance is to promote the power of global mobility as we enable collaboration between multinational companies and national operators. Therefore, we are very excited to welcome Millicom to our community," says Lazaro Fernandez, General Manager of FreeMove Alliance. "With Millicom, our partners and customers gain eight strong, emerging markets in Central and South America in one go. The partnership allows us also to further optimize the investment MNCs have made to deliver top notch mobile connectivity across borders."

Millicom's multinational customers who already operate in one or more of Millicom's eight Latin American mobile markets now have access to the alliance's tier one operators in the US, Brasil and Europe, as well as its wider global network. They will also benefit from the FreeMove Alliance's centralized enterprise mobility offerings including Contracting, Reporting, Ordering and Incident Management, as well as its extensive global business support.

TD

"We are delighted to join FreeMove Alliance," says Augusto Dumit, MNCs & Wholesale Director, Latin America at Millicom. "Customer centricity lies at the heart of everything we do, so the decision was an easy one as FreeMove Alliance's services will offer our Tigo Business MNC clients a number of tangible benefits. The new partnership will also extend Millicom's seamless MNC solutions to the US and globally, allowing us to strengthen our position in Latin America's competitive mobile managed services market."

About FreeMove Alliance

Established in 2003, FreeMove Alliance is the mobile telecommunications alliance between Deutsche Telekom, Orange, Telecom Italia and Telia. It serves as a mobile services hub that helps multinationals to optimize their investment in mobile connectivity by offering global access to the most reliable networks though a central point of management. FreeMove Alliance promotes the power of global mobility by enabling collaboration between multinational companies and local operators. It offers best-in-class connectivity across 90% of its footprint via its members' award-winning networks, as well as streamlined commercial arrangements, dedicated account support and value-added services in more than 100 countries.

About Millicom

Millicom (NASDAQ U.S.: TIGO, Nasdaq Stockholm: TIGO_SDB) is a leading provider of fixed and mobile services dedicated to emerging markets in Latin America and Africa. Millicom sets the pace when it comes to providing high-speed broadband and innovation around The Digital Lifestyle(R) services through its principal brand, TIGO. As of the end of September 2021, Millicom operating subsidiaries and joint ventures employ close to 21,000 people and provide mobile services to approximately 44 million customers, with a cable footprint of more than 12 million homes passed. Founded in 1990, Millicom International Cellular S.A. is headquartered in Luxembourg. For more information, visit: millicom.com. Connect with Millicom on Twitter, Instagram, Facebook and LinkedIn.

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CO dbptel : Deutsche Telekom AG | dgt : Orange SA | olivet

: Telecom Italia S.p.A. | televk : Telia Company AB

IN i7902202 : Mobile Telecommunications | i7902 :

Telecommunication Services | i79022 : Wireless Telecommunications Services | i79026 : Integrated

Communications Providers

NS cpartn : Partnerships/Collaborations | ccat :

Corporate/Industrial News | npress : Press Releases |

ncat : Content Types

RE lamz : Latin America | samz : South America | fra :

France | lux : Luxembourg | pana : Panama | benluxz : Benelux Countries | camz : Central America | dvpcoz : Developing Economies | eecz : European Union Countries | eurz : Europe | medz : Mediterranean |

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HD FreeMove Alliance and Millicom cooperate to better serve Multinationals across the Americas

CR FreeMove Alliance; PR Newswire

WC 687 words

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HD Telia TV& Media adds 30,000 direct VoD subscriptions in Q4, content costs turn EBITDA negative

WC 369 words

PD 28 January 2022

SN Telecompaper Europe

SC TELEUR
LA English

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Telia Company has reported higher sales at its TV & Media unit in the fourth quarter of 2021 as it improved its position in both linear and digital viewing. Direct subscriptions for video-on-demand (SVoD) increased by 30,000 in the quarter to 865,000 on 31 December. Adjusted EBITDA was negative amid higher costs, chiefly related to content.

Net sales at Telia TV & Media increased by 10.9 percent in the fourth quarter of 2021 to SEK 2.59 million, as it improved its position in traditional and OTT viewing. TV4's linear channels expanded their share of viewing amongst 15-64 year olds to 36.3 percent compared with 35.2 percent in Q4 2020, and time spent on TV4 Play increased 30 percent.

TD

Net sales rose by 11.3 percent on a like-for-like basis, thanks to higher service revenues. The exchange rate effect was negative at 0.4 percent. On a like-for-like basis, service revenues grew 11.3 percent to SEK 2.59 billion, explained by a 11.3 percent rise in TV turnover and a 11.6 percent increase in advertising revenues to SEK 1.77 billion. Television revenue grew because of the higher number of TV subscriptions, whereas advertising revenues rose amid growing demand combined with Telia's "market leading" total TV reach.

Adjusted EBITDA was negative to the tune of SEK 7 million after positive EBITDA of SEK 200 million a year earlier, with a negative adjusted EBITDA margin of 0.3 percent, after a positive margin of 8.6 percent a year earlier. On a like-for-like basis, adjusted EBITDA was a loss of SEK 5 million amid higher costs, mostly related to content. Capex excluding fees for licences, spectrum and right-of-use assets fell by 22.2 percent to SEK 64 million.

In 2022, Telia expects TV & Media to continue its heightened content investments as it shifts towards digital and OTT platforms and absorbs the FY impact of premium sports rights. The TV and Media unit is therefore expected to contribute a lower EBITDA in 2022 than in 2021.

co televk : Telia Company AB

imssoft : Streaming Services | idistr : Media Content Distribution | iint : Online Service Providers | imed : Media/Entertainment | itech : Technology | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS c151 : Earnings | c1513 : Sales Figures | c15 : Financial Performance | ccat : Corporate/Industrial News | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE eurz : Europe

PUB Telecompaper BV

AN Document TELEUR0020220128ei1s000b7



HD Telia Lithuania revenues up, profit down in Q4

WC 324 words

PD 28 January 2022

SN Telecompaper Europe

SC TELEUR
LA English

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Revenues of Telia Lithuania totaled EUR 113.3 million in the fourth quarter of 2021, up by 4.3 percent year-on-year. Adjusted EBITDA, excluding non-recurring items, amounted to EUR 33.9 million and was 1.5 percent lower compared to the fourth quarter of 2020, hurt by the spike in energy costs. The net profit totaled EUR 16.2 million, down by 3.9 percent.

Free cash flow of the company amounted to EUR 85.7 million in 2021 and was 0.9 percent higher. Telia said the last quarter of 2021 was marked by a surge in capital investments. In total EUR 41.9 million was invested into **connectivity** and **cloud** computing. By the year end in response to ever growing demand for IT services, modernisation and expansion of two major data centres was completed, and capacity of data servers quadrupled.

TD

By the end of 2021, more than 450 base stations supporting 2G, 3G, 4G and 5G connection were upgraded with Ericsson equipment. From October every second call in the company's mobile network was made using Voice over LTE (VoLTE), while mobile data download speeds in Telia Lithuania's network exceeded 104.5 Mbps at the end of December.

The mobile subscriber base grew by 8.6 percent to 1.518 million. The customer base using services on the fibre-optic network went up by 2.7 percent to 305,000, and TV subscribers increased by 0.8 percent to 255,000.

In 2021, revenue from IT services grew by 24.3 percent; revenue from broadband internet services went up by 11.2 percent; income from postpaid mobile services increased by 10.4 percent; and revenue from TV services was up by 8.5 percent. At the end of 2021 more than four times higher tariffs for electricity and higher marketing spending had a negative impact on quarterly EBITDA, Telia said.

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS ccat : Corporate/Industrial News | c151 : Earnings | c1513 : Sales Figures | c15 : Financial Performance | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

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Central/Eastern Europe

PUB Telecompaper BV

AN Document TELEUR0020220128ei1s00008



HD Telia Finland says 5G network supports 20% rise in 2021 mobile traffic

WC 189 words

PD 27 January 2022

SN Telecompaper Europe

SC TELEUR
LA English

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Telia Finland said that by the end of 2021, 5G traffic surpassed the volume on its 3G network, which will shut down by the end of 2023. Mobile traffic growth in 2021 was 20 percent, which was faster than in previous years. On 31 December, Telia's Finnish **5G network** had reached 64 percent population coverage with reception for over 3.5 million Finns in 158 locations.

After 2023, Telia Finland will move mobile calls and data to a comprehensive 4G network and a rapidly expanding **5G network**. Telia's 3G network has been shut down in Norway, followed by Denmark and Lithuania. In the US, operators are already switching off both the 2G and 3G networks, meaning tourists with an old phone may find their handset does not work everywhere. Sami Siiki, SVP of networks at Telia Finland, said people who have purchased a 5G subscription use an average of 40 percent more internet on their phone than 4G customers. Telia's **5G network** has achieved speeds of over 4 Gbps using the 26 GHz band

co televk : Telia Company AB

idct : Digital Cellular Technology | i7902202 : Mobile Telecommunications | i3302 : Computers/Consumer Electronics | i3303 : Networking | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | itech : Technology | iwrlssl : Wireless Area Network Technology

NS ccat : Corporate/Industrial News

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AN Document TELEUR0020220127ei1r000e5



HD Sweden: Telia to supply 5G-ready mobile network to SCA Obbola

CR M-Brain WC 88 words

PD 25 January 2022

SN Esmerk Swedish News

sc ESMKSW

LA English

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Infrastrukturnyheter, 25 Jan 2022, online:- Swedish forest company SCA has awarded Swedish telecommunications company Telia a contract for the supply of a dedicated, 5G-ready mobile network for its paper mill in Obbola in the municipality of Umeå, Sweden. The Obbola paper mill is undergoing a major transformation. SCA is building the world's largest paper machine at the mill. The **investment** will increase the annual production of kraftliner in Obbola to 725,000 tonnes.

co televk : Telia Company AB

IN idct: Digital Cellular Technology | ipap: Packaging | i3302: Computers/Consumer Electronics | i3303: Networking | iindstrls: Industrial Goods | itech: Technology | iwrlssl: Wireless Area Network Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications

NS c33 : Contracts/Orders | nabst : Abstracts | c21 : Output/Production | c24 : Capacity/Facilities | ccat : Corporate/Industrial News | cexpro : Products/Services | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE swed : Sweden | eecz : European Union Countries | eurz : Europe | nordz : Nordic Countries | scandz : Scandinavia

IPD Contracts Awarded

PUB M-Brain Insight Oy

AN Document ESMKSW0020220126ei1p0000l



HD Samsung, Apple lead best-selling smartphones at Telia Estonia in 2021

WC 81 words

PD 25 January 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Estonia announced the best-selling smartphones in its shops in 2021. The list includes devices from Samsung and Apple only.

The Samsung Galaxy A12 was the at the top of the list, followed by the Apple iPhone 12, Samsung Galaxy S21, Samsung Galaxy A32 and Samsung Galaxy A52. The Apple iPhone 11, Apple iPhone SE, Apple iPhone 12 mini, Apple iPhone 12 Pro and Samsung Galaxy A52s completed the top ten.

co applc : Apple Inc. | sansel : Samsung Electronics Co Ltd | televk : Telia Company AB

i34411 : Mobile Communications Devices | icellph : Cell/Mobile/Smart Phones | i3302 : Computers/Consumer Electronics | i3441 : Telecommunications Equipment | i3454 : Personal Electronics | ielec : Consumer Electronics | ihandaps : Handheld Electronic Devices | itech : Technology | i34542 : Audio/Video Equipment | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | icnp : Consumer Goods | idurhg : Durable Household Products | ihome : Home Electronics/Appliances

NS gptech : Personal Technology | glife : Living/Lifestyle | ccat : Corporate/Industrial News | gcat : Political/General News

RE estnia : Estonia | eurz : Europe | baltst : Baltic States | eecz : European Union Countries | eeurz : Central/Eastern Europe

PUB Telecompaper BV

AN Document TELEUR0020220125ei1p000ji



HD Telia Lithuania receives bank card data security certificate for Vilnius data centres

WC 84 words

PD 24 January 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Lithuania said it has received the PCI DSS (**Payment** Card Industry Data Security Standard) certificate for two of its data centres in Vilnius, namely the ones in the Zirmunai and Naujoji Vilnia neighbourhoods of the capital city.

The operator announced at the start of the year that it acquired a 2-hectare plot in Vilnius. It plans to invest EUR 10 million into the contruction of a new data centre there.

co televk : Telia Company AB

IN idcent : Data Centers/Colocation Services | i8394 : Computer Services | ibcs : Business/Consumer

Services | idserv : Data Services | i7902 : Telecommunication Services | i79022 : Wireless

Telecommunications Services | i7902202 : Mobile Telecommunications

NS gdatap: Privacy Issues/Information Security | ccat: Corporate/Industrial News | gcat:

Political/General News

RE vilniu : Vilnius | lith : Lithuania | eurz : Europe | baltst : Baltic States | eecz : European Union

Countries | eeurz : Central/Eastern Europe

PUB Telecompaper BV

AN Document TELEUR0020220124ei1o000b8



HD Telia Carrier rebrands as Arelion

BY posted by Telia Carrier

WC 544 words

PD 21 January 2022

SN Total Telecom Plus

sc TOTEL

LA English

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LP

Telia Carrier today unveiled its new brand, Arelion, reinforcing its goal to provide premium global connectivity services to the world's largest operators, content providers and enterprises. Arelion is the world's best-connected network spanning Europe, North America, and Asia, with more than 70,000 km of optical fiber and 1,700 MPLS endpoints, connecting customers in 125 countries. Enterprises from gaming to finance depend on the operator's business-critical services, including Global Internet Transit, Wavelengths, Ethernet, Mobile Data, and Wholesale Voice Termination. Arelion stands for world-class customer care and premium global connectivity. Over the past 30 years as Telia Carrier, Arelion built the number 1 Internet backbone, AS1299, which today powers nearly 65 percent of all Internet routes.

TD

Arelion leverages an award-winning legacy and relentless focus on customer excellence made possible by a unique culture, from an experienced executive team, technical experts and global service managers that care about every customer service interaction. Arelion puts people in the forefront, fixing 80 percent of customer issues at the first line for an effortless experience and industry-leading customer satisfaction. In 2021, Arelion commissioned a strategic transformation consultancy to survey top wholesale operators and enterprise customers about their key business drivers that impact connectivity partner selection. The results found that key decision-makers at large enterprises and service providers rated high quality, prestige, and trustworthiness as the most important buying criteria. Wholesale and enterprise customers ranked the operator highest in these three categories, and way ahead of its competitors. After conducting rigorous internal and external research, the new brand was created. "We live in the age of connectivity where people and businesses interact in real-time, all the time - wherever they are. As we move forward as Arelion, one thing that won't change is the core of our business; the people, our customers and partners that bring us together," said Staffan Göjeryd, CEO of Arelion. "Arelion will continue to support the mission that has resulted in 30 plus years of success and will continue to execute on our mission to connect the world to a brighter future and deliver the highest quality of services to our customers. That's all possible thanks to our investors at Polhem Infra, who share the same focus and vision for us."As a new independent company backed by Polhem Infra, an investment company jointly owned by some of the largest Swedish Pension Funds, Arelion is poised to keep the world connected for a brighter and more sustainable future. Arelion will continue to expand its global network to provide the network connectivity that people and businesses rely on more than ever to keep societies moving forward. The goal for the future is to remain focused on growth through market enablement, cost and speed. Arelion will continue to capitalize on the shift to buying Wavelength and Ethernet services, enabling service providers and large enterprises to take full advantage of the company's high-speed network infrastructure. Customers can rely on Arelion's network diversity, resiliency, scalability and security with native DDoS protection and state-of-the-art routing security to connect everything that matters. As part of the rebranding, Arelion has completely redesigned its brand identity.

RF 512226

co televk: Telia Company AB

i3303 : Networking | i3302 : Computers/Consumer Electronics | itech : Technology | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS ccat: Corporate/Industrial News

IPD News

PUB Terrapinn Limited

AN Document TOTEL00020220124ei1l00002



HD U-blox partners Ericsson and Telia in project to assess positioning devices in airports

WC 159 words

PD 21 January 2022 SN Telecompaper World

SC TELWOR
LA English

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LP

U-blox has announced that it is taking part in a project on positioning **devices** in airports with Ericsson and Telia, among other partners. The project is funded by Advanced and Innovative Digital Infrastructure, or DINPAS, a programme by Swedish government agency Vinnova. It aims to asses the requirements of the airports in terms of precise positioning of large numbers of **devices**.

TD

With implementation of the project, including software for generating corrections, 3GPP-based delivery, and navigation device, the partners will assess the performance of autonomous systems. The global navigation satellite systems (GNSS) is a key technology for absolute positioning. They also use information from a GNSS reference network, which can be efficiently distributed to support wide-ranging use cases and large numbers of devices globally using an open data format and efficient mobile network operator distribution defined by the cellular standards organisation 3GPP (Third Generation Partnership Program).

co swgais: Swedish Governmental Agency for Innovation Systems | ubloxa: u-blox Holding AG | televk: Telia Company AB

IN i764 : Airports | iairtr : Air Transport | itsp : Transportation/Logistics | i3302 : Computers/Consumer Electronics | i34531 : Semiconductors | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | ichip : Chipsets | icircb : Circuit Boards | icomp : Computing | icph : Computer Hardware | iindele : Industrial Electronics | iindstrls : Industrial Goods | itech : Technology

NS ccat : Corporate/Industrial News

PUB Telecompaper BV

AN Document TELWOR0020220121ei1l0002z



SE Extra

HD Facebook appeals Russian fines; UK to probe NortonLifeLock-Avast deal

BY Frances Josephine Espeso

WC 904 words

PD 20 January 2022

SN SNL Financial Extra

SC SNLFE

LA English

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LP

TOP NEWS IN TMT

* Meta Platforms Inc. unit Facebook filed a court appeal in Russia after it was fined 5% of its revenue in the country for not deleting illegal content, Telecompaper reported, citing Telecomdaily.ru.

TD

- * The U.K.'s Competition and Markets Authority launched a probe into NortonLifeLock Inc.'s proposed acquisition of Czech cybersecurity company Avast PLC, aiming to make its phase 1 decision by March 16, Dow Jones Newswires reported.
- ➤ Q&A: BBC Studios looks to expand content and distribution in India

In a recent interview, Senior Vice President and General Manager for Asia Phil Hardman said the company wants to form more partnerships with local TV providers and to launch its own free ad-supported channels.

➤ Global Multichannel: Broadband speeds follow fiber deployments in Eastern Europe

Broadband connection speeds have been rising across Eastern Europe in recent years, with Hungary leading the pack with an average download speed above 100 Mbps in 2021.

TECHNOLOGY

- * European businesses may have to stop using a popular analytics tool from Alphabet Inc.'s Google LLC after the Austrian data protection regulator found it had been used in ways that breached the EU's General Data Protection Regulation, the Wall Street Journal reported.
- * Dutch chip-equipment manufacturer ASML Holding NV said its sales grew to €4.99 billion in the fourth quarter of 2021, up from the previous year's €4.25 billion, Dow Jones Newswires reported. Its net profit increased to €1.77 billion from €1.35 billion the previous year. ASML CEO Peter Wennink said ASML plans to grow its workforce from 31,500 people to 35,000 people by the end of 2022, according to Bloomberg News.
- * In more ASML news, Intel Corp. purchased its TWINSCAN EXE:5200 production system, strengthening the companies' collaboration to drive high-volume chip manufacturing.
- * Private equity firm Bain Capital LP is in final negotiations to acquire French IT services company Inetum SA in a deal worth about \$2.3 billion, Reuters reported, citing sources.

INTERNET & OTT

- * Google pledged to improve its enforcement of an age-sensitive advertisement policy aimed at protecting minors online following a report that certain ads that should have been blocked in compliance with U.K. rules appeared on its search engine, Reuters reported.
- * dpa Deutsche Presse-Agentur GmbH will be in charge of content for the Facebook News service in Germany from April 1.

- * Russian internet company Yandex NV settled an antitrust claim alleging market dominance abuse with the country's Federal Antimonopoly Service and a group of other Russian internet companies. Yandex agreed to comply with certain requirements in exchange for terminating the case without paying any fines.
- * DAZN Group Ltd. will launch DAZN Studios as the sports streamer announces its global original content slate for this year.
- * Nordic Entertainment Group AB finalized plans to air the Dutch version of "Dragons' Den" on March 1 on its Viaplay streaming platform.
- * Orange SA reached a new milestone of 6 million fiber customers in France.
- * The U.K. House of Commons' public accounts committee said it is "not convinced" the Department for Digital, Culture, Media and Sport will fulfill its gigabit broadband rollout targets due to its heavy reliance on commercial contractors.

MEDIA

- * U.K. Culture Secretary Nadine Dorries is facing a backlash from members of the government's Cabinet for making announcements about the British Broadcasting Corp.'s license fee without first properly discussing the measures with other ministers, the Financial Times (London) reported, citing government sources. Dorries said the fee would be frozen for two years and then could be abolished altogether.
- * U.K.-based education company Pearson PLC is expecting sales to grow 8% year on year and to record an adjusted operating profit of about £385 million for 2021, Dow Jones Newswires reported.

TELECOMMUNICATIONS

- * The General Court of the European Union awarded Deutsche Telekom AG compensation of €1.8 million after the European Commission refused to pay default interest on a reimbursed fine. In 2014, the telco was fined €31,070,000 for abusing its dominant position in the Slovak broadband market, but the fine was reduced by over €12 million on appeal.
- * Telenor ASA struck a collaboration deal with Amazon Web Services Inc. to expand its 5G and edge services worldwide.
- * Telia Co. AB's Denmark unit signed a wholesale deal giving it access to Norlys AS' fiber network in Denmark. The deal allows Telia to offer services to a potential 700,000 new customers while increasing its fiber broadband reach to 1.7 million homes.
- * The Dutch government withdrew a bill that would have required telecom providers to provide The National Institute for Public Health and the Environment access to their transmission tower data to map the spread of COVID-19, reported Tweakers.

Click here for a summary of indexes on the S&P Capital IQ Pro platform.

Subscribe here to our weekly feature, APAC TechWatch, which highlights the latest on topics such as artificial intelligence, financial technology, internet of things, cloud computing, cybersecurity, 5G and semiconductors in the Asia-Pacific region.

Anne Freier, Amanda Kelly, Charlotte van Hek and Gerard O'Dwyer contributed to this report.

The Daily Dose has an editorial deadline of 7 a.m. London time. Some external links may require a subscription. Links are current as of publication time, and we are not responsible if those links are unavailable later.

- alsoft : Avast PLC | bbcwl : BBC Studios Distribution Limited | offair : Competition and Markets Authority | onlnfr : Meta Platforms Inc. | symt : NortonLifeLock Inc. | televk : Telia Company AB | bbc : British Broadcasting Corporation
- i3302 : Computers/Consumer Electronics | i330202 : Software | i3302021 : Applications Software | i475 : Printing/Publishing | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | icomp : Computing | iint : Online Service Providers | imed : Media/Entertainment | ipubl : Publishing | isecpri : Security/Privacy Software | isocial : Social Media Platforms/Tools | itech : Technology
- NS ccat : Corporate/Industrial News | cacqu : Acquisitions/Mergers | c181 :
 Acquisitions/Mergers/Shareholdings | c13 : Regulation/Government Policy | c18 : Ownership Changes |
 cactio : Corporate Actions | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News
 Filter

russ : Russia | uk : United Kingdom | asiaz : Asia | bric : BRICS Countries | devgcoz : Emerging Market Countries | dvpcoz : Developing Economies | eeurz : Central/Eastern Europe | eurz : Europe | ussrz : CIS Countries | weurz : Western Europe

IPD Industry News

PUB S&P Global Market Intelligence

Document SNLFE00020220121ei1k000dy ΑN



HD Telia Carrier rebrands as Arelion

WC 233 words

PD 20 January 2022 SN Telecompaper World

SC TELWOR
LA English

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LP

Telia Carrier has announced that it has re-branded as Arelion, following the completion last year of its sale by Telia Company to pensions **investment** firm Polhem Infra. It said the name is based on the English adjective 'reliable' and is inspired by the "strength, beauty and light" of names given to stars, and constellations such as Aldebaran, Sirius and Orion.

Arelion said its network links Europe, North America and Asia, with more than 70,000 km of optical fibre and 1,700 MPLS end-points, connecting customers in 125 countries. Over the past 30 years as Telia Carrier, it built up the internet backbone AS1299, which now powers nearly 65 percent of all internet routes

TD

In 2021, Arelion commissioned a consultancy to survey top wholesale operators and enterprise customers and found that decision-makers appreciate high quality, prestige and trustworthiness as the most important buying criteria. Wholesale and enterprise customers ranked the operator highest in these three categories, and way ahead of its competitors, it added. After conducting rigorous internal and external research, the new brand was created.

Staffan Gojeryd, CEO of Arelion, said the rebranded operator will continue its mission to "connect the world to a brighter future" with a high quality of service to customers. He added that the company will maintain its business core, namely the people, customers and partners that bring it together.

co televk : Telia Company AB

IN i3303 : Networking | i3302 : Computers/Consumer Electronics | itech : Technology | i7902 :

Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile

Telecommunications

NS ccat: Corporate/Industrial News

PUB Telecompaper BV

AN Document TELWOR0020220120ei1k0008f

HD Telia Carrier announces rebrand to Arelion after €935m sale

BY Alan Burkitt-Gray

WC 570 words

PD 19 January 2022

SN Capacity Magazine

SC CAPMAG

LA English

CY © 2022 Euromoney Trading Limited

LP

Staff across the world are being told about the new name in an online meeting due to start at 14:00 UK time today.

"It's important to stay with **connectivity**. We're still the same company, the same people," said CEO Staffan Göjeryd in an exclusive interview with Capacity.

TD

The new name is pronounced "ah-ray-li-yon", and is based on the word "reliable", said CMO Maja Sever. The website went live today.

The renamed company will expand under its new ownership from its traditional core business with telecoms carriers to include enterprises, said Göjeryd.

"We'll still focus on the core of the past 20 years, [but] we see there are a lot of enterprises moving to internet-first." They are increasingly wanting to connect consumers, "a big change from what they were doing before. A lot of enterprises are moving in that direction."

He added: "It's a matter of understanding where the market is going, where we're heading as an organisation. We still have a strong foothold in what we're known for. Connectivity is becoming increasingly important for different segments of customers."

Telia Company, the former parent, announced in October 2020 that it was selling its global operation, Telia Carrier, to Polhem Infra, an infrastructure investor owned by Swedish pension funds, for 9,450 million Swedish kronor (€935 million).

After a move that was totally unexpected by the industry, the two companies said they will have a "strategic long-term partnership". Göjeryd gave details in an interview with Capacity shortly after the announcement.

Group CEO Allison Kirkby said then: "I am confident that under the continued leadership of Staffan Göjeryd, head of Telia Carrier, Polhem Infra will be an excellent owner for Telia Carrier and that it will continue to go from strength to strength under their stewardship."

The sale was completed, after regulatory approvals, in June 2021.

The new brand will be "a different way for us to market ourselves", said Göjeryd. "It is important to play to the potential future, to strike out."

Arelion's biggest market is in the US, he said, "but the US is a very big market". The company's strong positions are in North America and Europe, with additional business in Asia.

Now, he plans to take it into "proximity markets", he told Capacity, densifying its network "to get closer to where the users are", and "maybe a bit more data centres".

Sever, who led the rebranding as head of brand, marketing and communications, said the asterisk-shaped logo that Arelion is using represents a network map and "the convergence of local networks". The design company, Bold Scandinavia, has also turned the asterisk into a spinning globe.

A survey of customers says they rated the former Telia Carrier highly for "quality, prestige and professionalism", she said. "It took us by surprise that they rated us so highly."

The branding company has also designed a new typeface, Arelion Sans, she said. There is also a version for display purposes with individual letters connected, to convey the theme "keeping the world connected" - which has been used by other telecoms organisations since the Covid pandemic started two years ago.

Arelion will shortly find there is a company of the same name, based in Bavaria. Arelion is also the hero of a series of online games and books.

- co televk : Telia Company AB
- **IN** i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications
- NS ccat : Corporate/Industrial News | niex : Interviews with Corporate Executives | nitv : Interviews | ncat : Content Types | nfact : Factiva Filters | nfcpex : C&E Executive News Filter
- **PUB** Euromoney Trading Limited
- AN Document CAPMAG0020220207ei1j0000f



HD Telia Carrier's new name is Arelion

WC 251 words

PD 19 January 2022

SN Optical Networks Daily

SC OBSERV

LA English

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LP

Telia Carrier, which operates the leading global Internet backbone, AS1299, has adopted a new name and brand -- Arelion.

The rebranding comes roughly a year after Polhem Infra, a private investment firm based in Sweden, acquired Telia Carrier from the Telia Company for SEK 9,450 million (US\$1.055 billion). The business became a fully-independent company in June 2021.

TD

Arelion's mission is to provide premium global connectivity services to the world's largest operators, content providers and enterprises. Its network spans Europe, North America, and Asia, with more than 70,000 km of optical fiber and 1,700 MPLS endpoints, connecting customers in 125 countries. The AS1299 backbone powers nearly 65 percent of all Internet routes.

"We live in the age of connectivity where people and businesses interact in real-time, all the time – wherever they are. As we move forward as Arelion, one thing that won't change is the core of our business: the people, our customers and partners that bring us together," said Staffan Göjeryd, CEO of Arelion. "Arelion will continue to support the mission that has resulted in 30 plus years of success and will continue to execute on our mission to connect the world to a brighter future and deliver the highest quality of services to our customers. That's all possible thanks to our investors at Polhem Infra, who share the same focus and vision for us."

https://www.arelion.com

https://youtu.be/R19VIK--jGI

CO televk: Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS c181 : Acquisitions/Mergers/Shareholdings | ccname : Corporate Name Changes | c02 : Corporate Changes | c18 : Ownership Changes | cactio : Corporate Actions | ccat : Corporate/Industrial News | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

IPD Arelion

PUB Electronics International

AN Document OBSERV0020220119ei1j0002t



HD Telia Carrier Rebrands as Arelion

WC 1,031 words

PD 19 January 2022

ET 15:30

SN PR Newswire

SC PRN

LA English

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LP

With a New Brand, Arelion is Poised to Deliver Premium Quality Global Connectivity

STOCKHOLM, Jan. 19, 2022 /PRNewswire/ -- Telia Carrier today unveiled its new brand, Arelion, reinforcing its goal to provide premium global **connectivity** services to the world's largest operators, **content** providers and enterprises. Arelion is the world's best-connected network spanning Europe, North America, and Asia, with more than 70,000 km of optical fiber and 1,700 MPLS endpoints, connecting customers in 125 countries. Enterprises from **gaming** to finance depend on the operator's business-critical services, including Global Internet Transit, Wavelengths, Ethernet, Mobile Data, and Wholesale Voice Termination.

TD

Arelion stands for world-class customer care and premium global connectivity. Over the past 30 years as Telia Carrier, Arelion built the number 1 Internet backbone, AS1299, which today powers nearly 65 percent of all Internet routes. Arelion leverages an award-winning legacy and relentless focus on customer excellence made possible by a unique culture, from an experienced executive team, technical experts and global service managers that care about every customer service interaction. Arelion puts people in the forefront, fixing 80 percent of customer issues at the first line for an effortless experience and industry-leading customer satisfaction.

Telia Carrier

In 2021, Arelion commissioned a strategic transformation consultancy to survey top wholesale operators and enterprise customers about their key business drivers that impact connectivity partner selection. The results found that key decision-makers at large enterprises and service providers rated high quality, prestige, and trustworthiness as the most important buying criteria. Wholesale and enterprise customers ranked the operator highest in these three categories, and way ahead of its competitors. After conducting rigorous internal and external research, the new brand was created.

"We live in the age of connectivity where people and businesses interact in real-time, all the time -wherever they are. As we move forward as Arelion, one thing that won't change is the core of our
business: the people, our customers and partners that bring us together," said Staffan Göjeryd, CEO of
Arelion. "Arelion will continue to support the mission that has resulted in 30 plus years of success and will
continue to execute on our mission to connect the world to a brighter future and deliver the highest quality
of services to our customers. That's all possible thanks to our investors at Polhem Infra, who share the
same focus and vision for us."

As a new independent company backed by Polhem Infra, an investment company jointly owned by some of the largest Swedish Pension Funds, Arelion is poised to keep the world connected for a brighter and more sustainable future. Arelion will continue to expand its global network to provide the network connectivity that people and businesses rely on more than ever to keep societies moving forward. The goal for the future is to remain focused on growth through market enablement, cost and speed. Arelion will continue to capitalize on the shift to buying Wavelength and Ethernet services, enabling service providers and large enterprises to take full advantage of the company's high-speed network infrastructure. Customers can rely on Arelion's network diversity, resiliency, scalability and security with native DDoS protection and state-of-the-art routing security to connect everything that matters.

As part of the rebranding, Arelion has completely redesigned its brand identity. Visit the new Arelion here: www.arelion.com

Resources

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-- Watch New Brand Video:
https://www.voutube.com/watch?v=YBIPHSXXuMo
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-- Media Kit: Images of spokespeople, new logo and more can be downloaded here.

Important Facts

Phonetic Pronunciation: Ah-ray-li-yon

Definition: Arelion is a reflection of the power, agility and passion we bring to the world. At its heart lies the English adjective 'reliable', and it takes inspiration from the strength, beauty and light of the names given to stars and constellations such as Aldebaran, Sirius and Orion. Arelion is a guiding light in connectivity.

History: Telia Carrier was founded in 1993 as a part of Telia Company. In 2020, Telia Company announced the divestment of Telia Carrier to Polhem Infra, jointly owned by some of the largest Swedish Pension Funds, whose goal is to lay the best possible foundation for long-term investments in infrastructure to meet society's long-term needs, including sustainability. As of June 1, 2021 Telia Carrier, now Arelion, has been a standalone company.

Network: Arelion is the world's best-connected network spanning Europe, North America, and Asia with over 70,000 km of optical fiber and 1,700 MPLS endpoints, connecting customers in 125 countries worldwide. Arelion operates more than 300 PoPs and a unique ecosystem of network service and cloud providers, including:

- -- Presence in 35 countries, and in 30 states in the US.
- -- Points of Presence (PoPs) in 120 datacenters in the US and 200 datacenters in Europe.
- -- Collaborations and partnerships with leading datacenter providers, including

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Digital Realty Trust, Equinix, Iron Mountain, Interxion, QTS, CoreSite, Cologix, Flexential, EdgeConneX and more.
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Network Security: Arelion uses cutting-edge security to ensure scalable worldwide protection including DDoS mitigation technology across our global IP backbone. Resource Public Key Infrastructure (RPKI) for security in Internet routing infrastructure and Border Gateway Protocol (BGP).

About Arelion

Formerly Telia Carrier, Arelion is a leading light in global connectivity services. We've been keeping the world connected since 1993 and today our global IP backbone, AS1299, is ranked number one in the world. Our network spans Europe, North America, and Asia with 70,000 km of optical fiber and 1,700 MPLS endpoints. Our award-winning customer service team supports our expansive customer base, who rely on us for their business-critical services. Discover more at www.arelion.com and follow us on LinkedIn and Twitter.

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multimedia: https://www.prnewswire.com/news-releases/telia-carrier-rebrands-as-arelion-301463423.html

SOURCE Arelion

(END)

co televk: Telia Company AB

IN i3303 : Networking | i3302 : Computers/Consumer Electronics | itech : Technology | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS ccat : Corporate/Industrial News | cbrand : Branding | npress : Press Releases | c31 : Marketing | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE usa: United States | namz: North America

PUB PR Newswire Association, Inc.

AN Document PRN0000020220119ei1j000oi



HD Norlys provides Telia Denmark with wholesale access to fibre network

WC 124 words

PD 19 January 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Danish operator Norlys has agreed to provide Telia Denmark with wholesale access to the Norlys **fibre** network, enabling Telia to target 700,000 potential new customers. This will bring Telia's total **fibre** broadband reach to 1.70 million residences. Taking Telia's coaxial footprint into account, too, it will be able to offer high-speed internet to nine out of ten homes in Denmark.

Through the agreement with Norlys, Telia will be able to serve business customers, too. Technical set-up for the wholesale access is under way and the aim is to connect the first Telia customers via Norlys' fibre network after summer 2022. The wholesale deal runs via the OpenNet platform.

co televk : Telia Company AB

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 :

Mobile Telecommunications

NS ccat : Corporate/Industrial News

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PUB Telecompaper BV

AN Document TELEUR0020220119ei1j0008g



HD Telia Estonia upgrades Safe Internet service with DDoS protection

WC 78 words

PD 18 January 2022

SN Telecompaper Europe

SC TELEUR
LA English

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LP

Telia Estonia has upgraded its Safe Internet service with a DDoS protection option. The upgrade follows increased demand for the service, as according to various estimates, the number of DDoS attacks has tripled within a year. The **cyber**-security team of the operator protects customers from an average 40 DDoS attacks weekly.

Telia Estonia launched its Safe Internet service in September 2020. The subscriber base totals almost 16,500.

co televk : Telia Company AB

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Central/Eastern Europe

PUB Telecompaper BV

AN Document TELEUR0020220118ei1i000mb



HD Estonian companies increasingly affected by cyber attacks

WC 251 words

PD 18 January 2022

ET 08:45

SN Baltic Business Daily

SC BALDAI
LA English

CY (c) 2022 Baltic News Service

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TALLINN, Jan 18, BNS – According to the Estonian arm of the telecommunications company Telia, the volume of distributed denial-of-service (DDoS) attacks against Estonian companies more than tripled over the year.

Telia's **cybersecurity** team in Estonia detects an average of 40 DDoS attacks against the company's customers every week and the telecommunications company confirmed that the number of such attacks is constantly increasing.

TD

Telia's head of security, Aigar Kais, pointed out that while the main targets of DDoS attacks are web-based entertainment and connectivity solutions, which have grown drastically in the last two years due to the pandemic, businesses providing other online services, including online stores, are increasingly the victims of DDoS attacks.

During a DDoS attack, a company's device that manages internet traffic, such as a server, router, or firewall, is artificially overloaded with a large number of queries. This can lead to a situation where network traffic becomes too slow or inaccessible to users due to heavy traffic.

"Unfortunately, it is becoming cheaper and easier for cyber criminals to conduct such attacks, and therefore more widely available. DDoS attacks are also used to disguise other cyber attacks -- for example, exploiting various vulnerabilities in a company's IT systems at a moment when the company is trying to solve network congestion problems," Kais said, adding that companies are also increasingly targeted by ransomware.

Tallinn newsroom, +372 56 505 306, majandus@bns.ee

Baltic News Service

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IPD Estonia

PUB AS Postimees Grupp

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HD Telia gets 5G ball rolling in Lithuania with DSS

BY Anne Morris
WC 544 words

PD 14 January 2022 SN Light Reading SC LITEREAD

LA English

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Countries all over the world are now enjoying the delights of new 5G networks, with the technology's promised faster speeds and lower latency as well as fancy new 5G devices. Some markets have of course been slower to jump on the 5G juggernaut – Estonia, Latvia and Lithuania among them.

The three Baltic states are now showing real 5G momentum, however. The latest development is that Sweden-based Telia has now decided to launch commercial 5G services in Lithuania ahead of the auction planned for later in 2022 - with the help of dynamic spectrum sharing (DSS) technology from Ericsson.

TD

Waiting for spectrum

Telia Lietuva has been testing 5G technology using non-commercial 3.5GHz frequencies for three years and entered into a strategic partnership with Ericsson to modernize its mobile network and rollout of 5G across the country.

Like its rivals Tele2 and Bite, it has also been waiting for the Communications Regulatory Authority of the Republic of Lithuania (RRT) to get on with auctioning some 5G-friendly spectrum in the 700MHz band.

The auction is now underway: RRT is inviting bids from auction participants with a deadline of January 25, 2022. Three blocks will be offered at the auction: one 2x10MHz and two 2x5MHz blocks from the 713-733MHz and 768-788MHz radio frequency bands. The initial price is euro 5 million (US\$5.7 million) for the 2x10MHz and euro 3 million (\$3.4 million) for the 2x5MHz blocks.

However, Telia Lietuva appears to have itchy feet and has now activated commercial 5G connections in Vilnius using its existing 2.1GHz frequency band. It is making use of DSS technology to enable the frequencies to support both 4G and 5G connections. The mobile operator said around 20 basestations are now in commercial 5G operation. Including the 3.5GHz test frequencies, a total of 110 basestations support 5G.

Dan Stromberg, CEO of Telia Lietuva, said the move sends an "important signal not only for consumers, but also for equipment manufacturers: 5G technology is becoming more and more mature in Lithuania."

Telia has already deployed 5G in Latvia and Estonia. In Latvia, its 60.3%-owned mobile operator Latvijas Mobilais Telefons (LMT) acquired spectrum in the country's 700MHz spectrum auction last December, and installed 100 5G basestations in 2021. It has also developed a 5G router with technology company MikroTik, and said the first LMT customers in Ādazi started using 5G home Internet services in spring last year.

Telia Estonia launched 5G using DSS technology from Ericsson. In Estonia, a sale of 3.5GHz licenses is expected to take place in the first quarter of 2022 following protracted negotiations at government level.

Meanwhile, Telia rival Tele2 has selected Nokia as its key 5G network partner in Estonia, Latvia and Lithuania. The operator recently said it now has everything in place to begin a nationwide rollout of 5G and upgrade of 4G in Latvia. It also holds frequencies in the 3.5GHz band in Latvia.

Related posts:

- * Tele2 picks Nokia for 5G RAN in Baltics
- * Telia to sell Latvian B2B business to Tet
- * Telia joins growing 5G SA club with Nokia
- Anne Morris, contributing editor, special to Light Reading

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CT annelmorris@gmail.com

co eric : Telefonaktiebolaget LM Ericsson | televk : Telia Company AB

IN idct : Digital Cellular Technology | i7902202 : Mobile Telecommunications | i3302 :

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IPD Topics

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AN Document LITEREAD20220114ei1e0002u

HD Lithuania: Telia Lietuva turns on commercial 5G connectivity

CR M-Brain

WC 70 words

PD 13 January 2022

SN Esmerk Baltic News

SC ESMKBA

LA English

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Verslo žinios, 13 Jan 2022, online:- The Lithuanian telecommunications company, Telia Lietuva, has become the first company in Lithuania to introduce commercial 5G **connectivity**. The company activated 20 base stations in the Antakalnis, Sauletekis, and Naujoji Vilnia districts of Vilnius for 5G services. The base stations allow the same frequency band to be used for both 4G and 5G communication.

CO Itvcom: Telia Lietuva AB | televk: Telia Company AB

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IPD Corporate, Appointments

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SE Extra

HD KKR eyes co-investors for TIM bid; Deutsche Telekom names new technology chief

BY Phoebe Magdirila

WC 1.016 words

PD 11 January 2022

SN SNL Financial Extra

SC SNLFE

LA English

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TOP NEWS IN TMT

* KKR & Co. Inc. is looking to team up with Saudia Arabia's Public Investment Fund as a co-investor in its bid to acquire Telecom Italia SpA, Bloomberg News reported, citing sources. The U.S.-based private equity company also held discussions with other sovereign wealth funds and infrastructure investors about a potential tie-up.

TD

- * Deutsche Telekom AG appointed Abdu Mudesir as group technology officer, starting April 1. Mudesir replaces Alex Choi, who will take over research, T-Labs leadership and special projects, Claudia Nemat, the company's management board member for technology & innovation, announced in a LinkedIn post.
- ➤ Data Dispatch: J.P. Morgan leads from start to finish in 2021 as top telecom debt adviser
- J.P. Morgan Securities LLC, which built a sizable lead early in the year, received \$6.11 billion in aggregate deal credit from 33 debt offerings in 2021, including Verizon Communications Inc.'s \$25 billion bond sale in the first quarter.
- ➤ Technology: Q3'21 global smart TV shipments show slight uptick vs. pre-pandemic averages

The third-quarter 2021 smart TV market stumbled year over year as demand cooled and supply chain issues persisted, but shipment volumes were running slightly higher than the 2017 to 2019 average.

TECHNOLOGY

- * U.K. IT company Softline Holding PLC agreed to acquire an 85% stake in Academy IT in a bid to strengthen its position in the technology education sector globally. The financial terms of the deal were not disclosed.
- * French IT company Atos SE said it will not meet earlier announced financial targets for fiscal year 2021 amid supply chain challenges and delays in clinching final agreements with several large customers to get compensated for extra work done in 2021.
- * U.K. cybersecurity company Arqit Quantum Inc. signed an agreement with the Australian government to deliver the first phase of work relating to Arqit's Federated Quantum System Project.
- * Dutch quantum computing software startup Qu & Co B.V. is merging with French quantum tech developer Pasqal SAS. The quantum businesses will continue as Pasqal and will be headquartered in Paris.

INTERNET & OTT

* Alphabet Inc. and Meta Platforms Inc. said they were working on improving their cookie consent controls after facing millions of euros in French fines for allegedly making it more complicated for users to refuse cookies. Mobile World Live reported, citing statements.

- * Canada-based online publishing platform Legible Inc. started trading its common shares on the Frankfurt Stock Exchange under the trading symbol D0T.
- * French magazine publishers union SEPM filed a new complaint before the competition authority against Google LLC's alleged noncompliance with the regulator's orders concerning neighboring rights.
- * Irish ministers will sign off on a new online safety and media regulation bill, which will regulate social media platforms and their handling of harmful content, the Irish Independent (Dublin) reported. The new measures will also impose a content levy for streaming platforms such as Netflix Inc. to fund the country's film industry.
- * The U.K. Information Commissioners' Office will talk to Meta Platforms over the compliance of its virtual reality business with the Children's Code, BBC News reported. This follows reports of harassment of minors in a third-party virtual reality chat service.
- * Nordic Entertainment Group AB streamer Viaplay signed a multiyear partnership that will see reigning Formula 1 World Drivers' Champion Max Verstappen being featured in exclusive Viaplay content.
- * U.K. full-fiber company CityFibre Holdings Ltd. announced it began a new £5 million townwide infrastructure rollout.
- * Chinese cloud computing service provider Capital Online tapped Nokia Corp. to upgrade its internet protocol backbone network.

MEDIA

- * Mediahuis NV completed the acquisition of German company Aachener Verlagsgesellschaft GmbH, or AVG. The Belgian media company will also become a 70% shareholder in AVG's subsidiary Medienhaus Aachen GmbH, which publishes newspapers Aachener Zeitung and Aachener Nachrichten.
- * Tobias Andersson announced his intention to step down as a board member of Finland-based Nitro Games Oyj in January, citing personal reasons.

TELECOMMUNICATIONS

- * Kismet Capital Group completed the acquisition of infrastructure operator Russian Towers following the receipt of regulatory approval, Reuters reported.
- * Orange Polska SA's fiber-optic network surpassed 1 million customers, including about 50,000 subscribers of other operators that use the Orange network, Telecompaper reported. Orange SA owns Orange Polska.
- * Italian telco Fastweb SpA will invest about €3 billion to cover 90% of the population with its 5G network as well as 14.5 million residents with fiber-to-the-home services and 12.5 million households and businesses with fixed wireless access technology by 2025 to 2026, Telecompaper reported.
- * U.K. satellite systems provider Isotropic Systems Ltd. appointed Rash Sahota as general manager and COO.

FILM & TV

- * The British Broadcasting Corp. launched a news program called "Context" on BBC World News and the BBC News Channel, which will see a panel of guests discussing the day's top news stories, both local and global.
- * Telefónica SA's pay TV operator Movistar+ reached a multiyear deal to broadcast the National Hockey League's U.S. matches in Spain, Advanced Television reported.
- * Warner Media LLC's TNT Now streaming service launched on Vodafone España SAU's Vodafone TV, Digital TV Europe reported.
- * Discovery Inc. and Telia Co. AB extended their partnership in Estonia, allowing Telia subscribers in the country to access new Discovery channels, including Discovery Channel, Eurosport 1 HD and Animal Planet HD, Broadband TV News reported.

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Subscribe here to our new weekly feature, APAC TechWatch, which highlights the latest on topics such as artificial intelligence, financial technology, the internet of things, cloud computing, cybersecurity, 5G and semiconductors in the Asia-Pacific region.

Frances Espeso, Anne Freier, Sylvia Edwards Davis, Koen Pijnappels and Esben Svendsen contributed to this report.

The Daily Dose has an editorial deadline of 7 a.m. London time. Some external links may require a subscription. Links are current as of publication time, and we are not responsible if those links are unavailable later.

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HD 2022 Predictions from Thought Leaders

WC 72 words

PD 11 January 2022

SN Optical Networks Daily

SC OBSERV

LA English

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AT&T Cybersecurity

Top 5 Cybersecurity Trends this Year

TD

Bindu Sundaresan, Director at AT&T Cybersecurity

Microsoft Azure

Cloud-driven Economic Disruption for Services

Sanjay Mewada, Worldwide Marketing Leader at Microsoft Azure

Telia Carrier

Network Sophistication and More Bandwidth

Mattias Fridström, Vice President & Chief Evangelist at Telia Carrier

Telstra

Next-gen Satellites, Hybrid Work, Emerging Markets Infrastructure

Noah Drake, Vice President of Customer Solutions, Americas at Telstra

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Mobile Telecommunications

IPD Predictions

PUB Electronics International

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SE Extra

HD Microsoft inks German news content deal; Telia to sell Latvian unit

BY Frances Josephine Espeso

WC 748 words

PD 5 January 2022

SN SNL Financial Extra

SC SNLFE

LA English

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TOP NEWS IN TMT

* German publisher Der Spiegel signed a license agreement allowing Microsoft Corp. to use its news **content** on the Bing search engine in the EU. The deal, which is in line with the bloc's copyright directive, follows a long-standing partnership between the two companies.

TD

- * Sweden's Telia Co. AB agreed to sell the Telia Latvija Sia unit to Latvian telecom operator Tet for €10.8 million, Dow Jones Newswires reported. Telia owns a 49% stake in Tet.
- ➤ Conference Chatter: CES 2022: Tech growth to slow after strong 2021 as chip shortage persists

The Consumer Technology Association expects revenue in the consumer tech industry to reach \$505 billion by 2022, up 2.8% from 2021. But headwinds from supply chain constraints add uncertainty to the forecast.

➤ Q&A: Ajit Pai says FCC-FAA 5G spectrum dispute calls for confirmation of NTIA head

S&P Global Market Intelligence recently spoke with the former FCC chairman to get his views on ongoing broadband and spectrum matters, as well as his outlook for 2022. Pai is now a nonresident fellow at the American Enterprise Institute.

TECHNOLOGY

- * IT service management company 4iG Nyrt. completed its acquisition of Romania Cable & Data Systems' Hungarian unit DIGI Távközlési és Szolgáltató Kft. for approximately €625 million. Digi Communications NV owns Romania Cable & Data Systems.
- * French IT company Atos SE closed its acquisition of Cloudreach Europe Ltd.
- * Orange SA, through its Orange Digital Investment holding company, is investing in the Move Capital I fund to support European business-to-business technology companies active in sectors like the internet of things, artificial intelligence and cybersecurity.
- * Integral Ad Science Holding Corp. acquired French digital content classification company Context, formerly Reminiz, for an undisclosed amount.

INTERNET & OTT

* Nordic Entertainment Group AB signed a multi-rights deal with Canada's Entertainment One Ltd., granting the Nordic streaming platform rights to over 700 hours of drama content in the Nordics, the Baltics, Poland and the Netherlands, according to The Hollywood Reporter.

MEDIA

* Stagwell Inc. acquired London-based full-service media planning and buying agency Goodstuff Communications for an undisclosed amount.

* Dutch movie theater operator Pathé Theatres BV acquired a majority share in film streaming platform Pathé Thuis in the Netherlands. Pathé SAS owns Pathé Theatres.

TELECOMMUNICATIONS

- * Telecom Italia SpA is working on a new three-year business plan that could include a spinoff of assets as it assesses KKR & Co. Inc.'s €10.8 billion nonbinding buyout bid, Reuters reported, citing sources. This comes as Italy's communications regulator deemed the telco's plan to help fund its fiber-optic network rollout to be compliant with EU rules, according to a separate Reuters report.
- * Nokia Corp. and Sweden-headquartered Tele2 AB extended their 5G Radio Access Network deployment partnership in Estonia, Latvia and Lithuania in a deal building on 25 years of cooperation.
- * France's data protection regulator fined Iliad's Free €300,000 for not having correctly processed and protected the personal data of its mobile customers.
- * U.K.-headquartered telecom infrastructure operator IHS Holding Ltd. named Bill Bates chief strategy officer and senior vice president.
- * The Netherlands-based Veon Ltd. appointed Karen Linehan to its board as nonexecutive director. Linehan replaces Steve Pusey, who stepped down in 2021.
- * Slovakia-based telco 4ka said it reached nearly 600,000 subscribers in 2021, Telecompaper reported.

FILM & TV

- * British Telecom will broadcast matches from the Spanish soccer tournament Spanish Super Cup 2021/22 on BT Sport. Spain's Telefónica SA will also air the tournament's games on its Vamos sports channel from Jan. 12 to Jan. 16, Telecompaper reported.
- * German sports TV channel Tennis Channel acquired the licensing rights to broadcast the WTA Tour in 2022, reported German news site DigitalFernsehen. The streaming channel will exclusively broadcast over 50 live games.

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Subscribe here to our new weekly feature, APAC TechWatch, which highlights the latest on topics such as artificial intelligence, financial technology, the internet of things, cloud computing, cybersecurity, 5G and semiconductors in the Asia-Pacific region.

Anne Freier, Sylvia Edwards Davis, Koen Pijnappels and Esben Svendsen contributed to this report.

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HD Elisa claims Finland's most comprehensive 5G coverage after late 2021 drive test

WC 148 words

PD 5 January 2022

SN Telecompaper Europe

SC TELEUR
LA English

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Finnish operator Elisa said that following broad expansion, its **5G network** now serves more than 4 million Finns, up from 2 million at the start of 2021. According to a survey commissioned by Elisa from Boftel Estonia OU, it is the most comprehensive **5G network** in the country, compared with those of Telia Finland and DNA.

The survey done between 16 November and 11 December 2021 by driving an 8,000 km route between 314 locations where the operators' coverage map indicated that there was 5G reception. Boftel found that Elisa's **5G network** is 7 percent more comprehensive than Telia's and 17 percent more comprehensive than DNA's. Elisa's **5G network** is up and running in 153 at the start of 2022, said Sami Rajamaki, head of online services at the operator.

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HD Telia Company inks deal to sell Telia Latvia to Tet

BY Natalie Bannerman

WC 306 words

PD 4 January 2022

SN Capacity Magazine

SC CAPMAG

LA English

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The price represents a FY 2021 Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) multiple of 10x.

As a leading B2B telecom services provider, Telia Latvia has 46 employees and offers large businesses across Latvia solutions across telecoms services, **cloud** services, data centre solutions and media solutions.

TD

"We have run a competitive auction process for the sale of Telia Latvia during the autumn where a significant number of potential buyers were invited," said Andreas Ekström, head of Latvia at Telia Company.

"We are pleased that we have now reached an agreement with Tet who with this acquisition will strengthen its positions withing the enterprise segment with Telia Latvia's network and technology assets and highly skilled employees. Latvia is a highly interesting ICT market and Telia Company remain committed to continue contributing to the digitalization of Latvia with our engagement in Tet and LMT."

Tet is a technology and entertainment operator in Latvia, delivering ICT and pay-TV services, as well as electricity and other services.

The company is owned by the Republic of Latvia (51%) through SIA Publisko aktīvu pārvaldītājs Possessor and Tilts Communications A/S (49%), a wholly owned Telia Company entity. In addition, Telia Company also owns 60.3% in Latvian mobile operator LMT.

"Tet's strategy is to accelerate growth via acquisitions, and we are very excited about the opportunity to acquire Telia Latvia," said Uldis Tatarcuks, CEO of Tet.

"We believe our businesses complement each other, especially within our data centre and transmission business. We look forward to welcome Telia Latvia and its employees to Tet and together develop the business to the benefit of our customers, employees and the Latvian society at large".

The deal is due to close in the second quarter of 2022, subject to customary regulatory approvals.

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HD Tele2 picks Nokia for 5G RAN in Baltics

BY Anne Morris
WC 485 words
PD 4 January 2022
SN Light Reading
SC LITEREAD

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LA

Nokia hit the ground running in 2022 with the news that it has picked up more 5G network deals from long-standing partner Tele2.

The Sweden-based operator announced on Tuesday that it has selected Nokia as its 5G radio network access (RAN) partner in Estonia, Latvia and Lithuania, meaning that the Finnish vendor has become its key 5G vendor throughout the Baltics.

TD

Tele2 previously revealed that Nokia is its primary partner for 5G core networks in the standalone era, with deployment expected to have started during 2021. Nokia said it will deploy standalone 5G core and voice-over-5G technology for Tele2 operations in Sweden, Latvia, Lithuania and Estonia.

Click here to view Figure 1.

<u>Ericsson</u>is also providing 5G RAN equipment to <u>Net4Mobility</u>, the network joint venture of Tele2 and <u>Telenor</u> in Sweden, after the JV booted <u>Huawei</u> out of its 5G rollout project.

Ramping up 5G

Tele2 already provides 5G services to customers in Sweden under the Tele2 and Comviq brands.

The operator said it now has everything in place to begin a nationwide rollout of 5G and upgrade of 4G in Latvia following the completion of the country's 700MHz spectrum auction in December 2021. It also holds frequencies in the 3.5GHz band. Tele2 competes with Bite and LMT in Latvia.

However, 5G spectrum auctions have yet to take place in Estonia and Lithuania.

In Estonia, a sale of 3.5GHz licenses is expected to take place in the first quarter of 2022 following protracted negotiations at government level. Estonia is home to three mobile network operators: Telia, Elisa and Tele2. Nokia recently won a 5G RAN deal from Elisa Estonia, while Telia Estonia has already launched 5G using dynamic spectrum sharing technology from Ericsson.

Want to know more about 5G? Check out our dedicated 5G content channel here on Light Reading.

In October 2021, the Communications Regulatory Authority of the Republic of Lithuania (RRT) announced plans to auction 700MHz frequencies for 5G networks. The deadline for the submission of applications is January 25, 2022.

Three blocks will be offered at the auction: one 2x10MHz and two 2x5MHz blocks from the 713-733MHz and 768-788MHz radio frequency bands. The initial price is euro 5 million for the 2x10MHz and euro 3 million for the 2x5MHz blocks.

As well as Tele2, Telia and <u>Bite</u> provide mobile services in Lithuania. <u>Telia Lithuania</u>, which is phasing out Huawei RAN equipment and has entered into a strategic partnership with Ericsson to modernize its mobile network and rollout of 5G across the country, has already been testing 5G using frequencies provided by the regulator.

Related posts:

- * Tele2 hails growing momentum in Q3 2021
- * Nokia highlights new 4G and 5G role at Sweden's Net4Mobility
- * Tele2 taps Nokia for 5G core in Sweden and Baltics
- Anne Morris, contributing editor, special to Light Reading

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HD Eurobites: Orange invests in Europe's 'technological sovereignty'

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Also in today's EMEA regional roundup: Springo joins the FiberCop fold; Telefonica, Microsoft hawk hybrid **cloud**; Telia sells Latvian unit.

* Orange is investing an unspecified amount in Move Capital I, a fund that supports "future B2B champions" in the European tech sector, particularly those working in such areas as the Internet of Things, artificial intelligence, **data analytics** and **cybersecurity**. The move, says Orange, forms part of a wider plan to reduce Europe's dependence on non-European technologies - "technological sovereignty," as the company terms it.

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- * Springo, an Internet service provider operating in north-east Italy, has become the latest company to sign up to the FiberCop last-mile FTTH network. Springo will ride on the network to reach homes in the municipalities of Belluno, Conegliano, Montebelluna, Feltre and Cortina d'Ampezzo. (See <u>FiberCop is</u> go after KKR and Fastweb firm up stakes.)
- * And while we're on the subject, Reuters reports that shares in Telecom Italia (TIM), one of the backers of FiberCop, rose 2.9% on Monday after state investor CDP confirmed its support for a plan to merge TIM's network assets with those of rival Open Fiber. CDP, which controls Open Fiber, is TIM's second-largest investor.
- * Telefonica's cybersecurity unit, Telefonica Tech, has firmed up its alliance with Microsoft to tout hybrid cloud offerings to public administrations and companies in regulated sectors, with a focus on monitoring and encryption services to reassure such customers about the security and privacy of their data in Microsoft Azure, Microsoft 365 and Microsoft Dynamics 365.
- * Telia has reached an agreement to sell its B2B-focused Latvian unit to Tet following an open auction process, for euro 10.75 million (US\$12.12 million). Telia will retain a 49% ownership in Tet, and it still holds 60.3% ownership of Latvian mobile operator LMT. The Tet deal is expected to close in the second quarter. Tet is a state-owned technology and entertainment operator offering ICT and pay-TV services to households, businesses, the government and municipal institutions, as well as electricity and other services.
- * Truespeed, a fiber infrastructure provider and ISP based in south-west England, has secured a second tranche of funding from Aviva Investors. The company hopes that the GB pound 100 million (\$135 million) investment which follows an initial GB pound 75 million (\$101 million) investment made by Aviva Investors in 2017 will help it accelerate its fiber rollout in the region.
- * Swisscom has teamed up with Orell Fussli, a systems provider specializing in security technologies and identification systems, to develop legally binding digital certificates that can be used, for example, to provide age verification when purchasing age-restricted products in Switzerland.
- Paul Rainford, Assistant Editor, Europe, Light Reading
- CT p.rainford@yahoo.co.uk
- dgt: Orange SA | mcrost: Microsoft Corporation | televk: Telia Company AB
- idct : Digital Cellular Technology | i3302 : Computers/Consumer Electronics | i3303 : Networking | itech : Technology | iwrlssl : Wireless Area Network Technology | i330202 : Software | i3302021 :

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