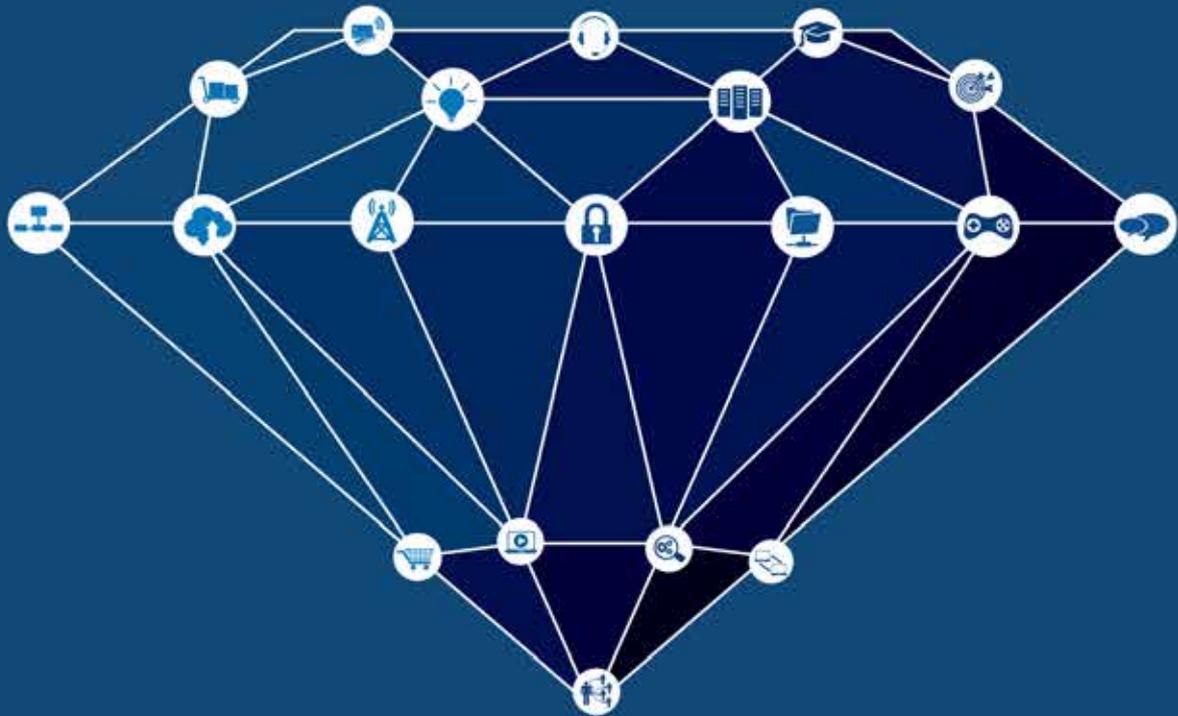


2017 Annual Report





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“

France-IX is the Premier Internet Peering Service Provider in France, offering public and private interconnection services through its carrier and data centre neutral exchange points in Paris and Marseille.

Founded in June 2010 with the support of the French Internet community, France-IX is a member-based association whose core values are neutrality, sustainability and constant improvement of the Internet.

”

1 Corporate outlook

Together,
your Internet
even better

1.1 CHRISTIAN KAUFMANN

FRANCE IX ASSOCIATION BOARD PRESIDENT



Welcome back to the France-IX Annual Report. This past year has been monumental for a number of reasons looking from a macro to micro level. France welcomed its youngest ever president, Emmanuel Macron, whose youthful positivity has helped usher in a period of renewed optimism for everyone. In fact, it was Macron who set the tone for the future in January this year when he told the World Economic Forum in Davos "France is back," as he set out plans for a 10-year strategy for Europe and called on the EU to fix issues on, among other things, digital and investment.

Macron's words are not empty rhetoric, the French government is pushing ahead with ambitious plans to deliver 100 percent of the population with access to broadband by 2022, while last year witnessed a record number of deals involving French technology companies. Indeed, over the past five years, investment in French tech firms has multiplied by five times, which is a unique achievement globally.

In 2017, foreign investment reached a 10-year high in France as it became the number one European country targeted by foreign-owned companies for their development. US firms stand on top of the investment podium, accounting for 18 percent of total investments in France with 230 projects. All this of course has a positive influence on the bandwidth and interconnection needs in France.

“
As the leading connectivity provider in France, we stand at the physical and metaphorical crossroads of these investments and tech trends. Broadband connectivity and traffic are rising at an exponential rate and this has been very much reflected by our continued expansion in Paris and Marseille.”

Initiatives such as business incubator Station F, in Paris, have attracted investment from several France-IX members including the likes of Facebook, Microsoft, and Vente-privee. While exciting technological fields such as AI are also drawing investors to France including massive global innovators Google, Samsung, IBM, DeepMind, and Fujitsu who have chosen Paris to create AI labs and research centres. Adding further fuel to the AI flames, Emmanuel Macron announced that his government plans to spend €1.5 billion over the next five years to support research in the field, encourage start-ups, and collect data which can be used, and shared, by engineers, ensuring that the current positive trends will continue for the foreseeable future.

Despite these growth trends and investments being made in the country, the infrastructure in general and France-IX in particular, the board and the management are acutely aware that the continuing transit price erosion and the increase of new IX in the market also generates pressure on pricing and service expectations. Therefore, increased efficiency inside France-IX and potentially in collaboration with other non-profit internet exchanges, with regards cost sharing, was a key focus for the board in 2017.



Finally, a word about "égalité". France-IX is more determined than ever to provide an environment that supports equality and diversity. Organisations today are measured by more than the profits they return, and as a non-profit organisation ourselves, we are scrutinised perhaps more than most about how we run our operations. It is an unfortunate fact of the business world that women are woefully underrepresented in senior positions, indeed among the world's largest 500 companies, only 10.9 percent of senior executives are female. At France-IX we are making a commitment to deliver a more balanced board from a gender perspective. Organisations with a more balanced workforce have been proven to perform at a higher level and generate more revenue than boards without gender diversity.

Since the last election the board composition has changed, Gregoire Villain from Kentik has joined the board, Clement Cavadore, Jérôme Fleury and myself were re-elected.

I want to thank Bocar Kane who left the board for his dedicated work and passion and for his background knowledge on Africa and emerging markets. He will be missed.

“With that in mind, the future looks bright for France-IX and our members, without whom we would cease to exist, so thank you everyone for making 2017 a great year, and here's to 2018!”

”

1.2 FRANCK SIMON PRESIDENT, FRANCE IX SERVICES THE YEAR 2017



“ 2017 was a great year for France-IX. We accelerated our growth, increased value for our members and positioned ourselves as the market leader in the French interconnection landscape. ”

2017 was a great year for France-IX. We made incredible progress with our community development, both in terms of members and partners, in France and internationally. We invested time, money and considerable efforts in our core network which enabled us to offer exceptional availability in response to new market requirements and to provide an improved cost base for 2018. We developed a long-term partnership with Orange, in addition to a total of seven new remote peering partners, with the RIPE organisation and with new equipment vendors. We received significant market recognition winning the award for Best Internet Exchange Innovation at the Global Carrier Awards 2017.

And last, but not least, we delivered a compelling set of operational and financial results that once again prove the relevancy of the France-IX economic model and its capacity to create value for its membership.

We have increased our penetration in promising market segments, including corporates and cloud providers. Our total membership grew extensively and is now the largest peering community in France. Digital transformation is happening across the board in France as companies everywhere increase investment in their information-communication assets. A genuine cloud revolution is taking place throughout our entire value chain at an amazing speed and we are uniquely positioned to gather the various interests of the concerned parties.

“ We have been working hard to expand our eco-system because we believe that we are at the dawn of a new Internet revolution. ”



“ 2017 was also a year of great progress in the transformation of our services portfolio, with our Marketplace offering a more efficient, agile and cost-effective market solution. ”



Being recognised for our innovation, vision and excellence across the global and regional data centre and Internet Exchange market for the uniqueness of the France-IX Marketplace has validated our strategy. We recognised the traditional IXP business model would not be enough to continue growing rapidly and independently over the next decade. Leading IXPs in Europe have changed their businesses, expanding intensively outside of their home markets, interconnecting every city in the world like a network service provider. Other niche players have started to adjust, redefining themselves somewhere between a distributed IXP and an Ethernet carrier. In addition, new players have started to emerge, taking advantage of the velocity and simplicity of SDN-based services to offer new consumption models in the data centre ecosystem, mirroring developments in cloud-based services.

“ We, at France-IX, plan to keep exceeding our member expectations and play a pivotal role in developing a better Internet for all. ”

Finally, thanks to our proximity and the quality of our interactions with our members, we have defined and implemented major technical improvements such as a new route service filtering policy for the benefits of our community. 2017 was a pivotal year in demonstrating our superior engineering and quality of service capabilities. We achieved our promises and even went beyond our goal of offering a strong and reliable service.

More than any other company, since we are and plan to stay a member-led non-profit professional organisation, offering the best quality to all Internet networks in France, we believe we are fulfilling the mission that we translated in 2017 in our new motto: [Together, your Internet, even better.](#)

Together,
your Internet,
even better.

1.3 2017 KEY STATISTICS

MEMBERSHIP ACQUISITION



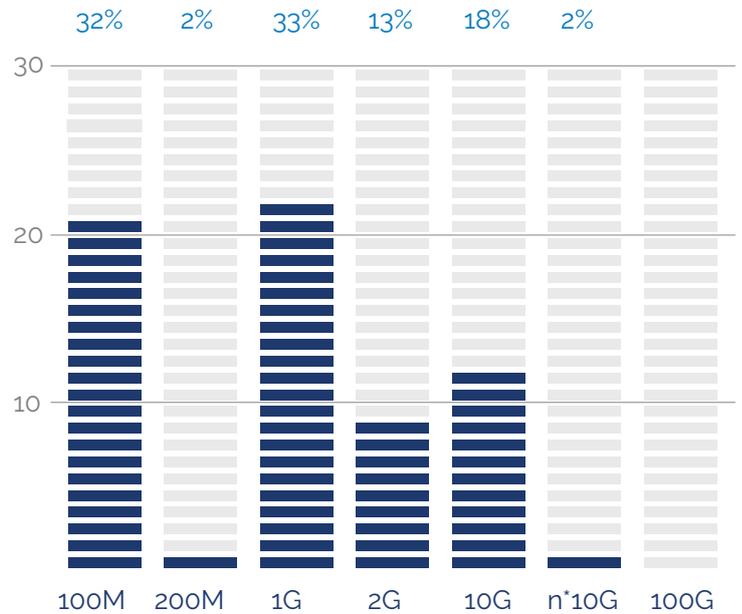
66
Total new
connected Members



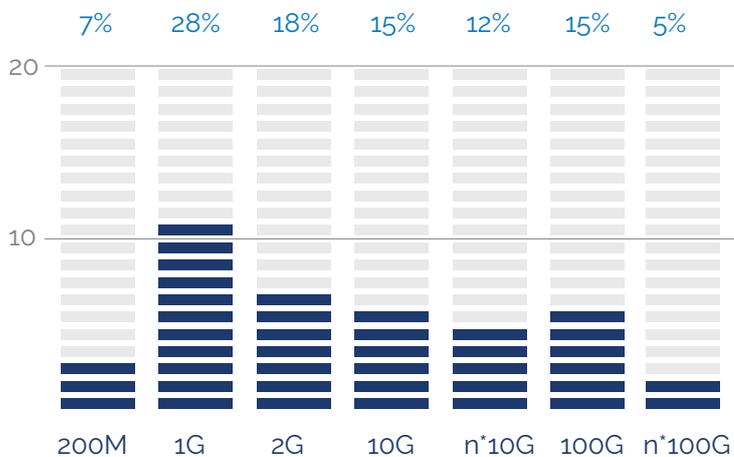
48
Direct members



18
Members via
Resellers



MEMBERSHIP UPGRADE



40
Total upgrades from
existing members

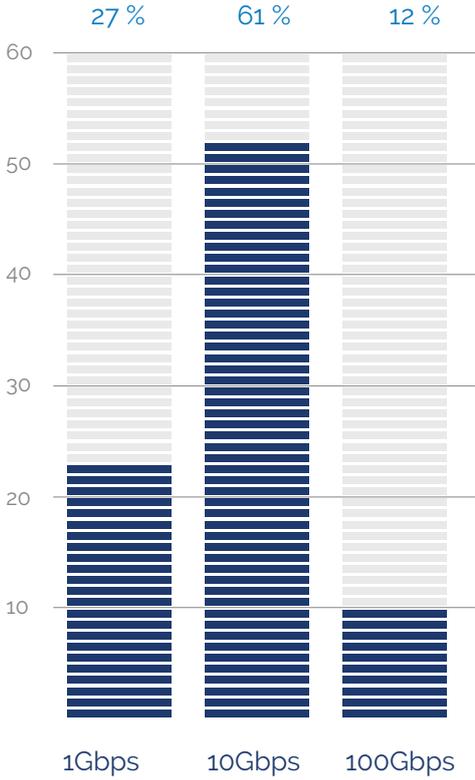


38
Upgrades from
direct members



2
Upgrades from
members via
resellers

NEW PROVISIONED PORTS



85
Total new provisioned ports

PEAK TRAFFIC



ANNUAL SERVICE AVAILABILITY



PARIS

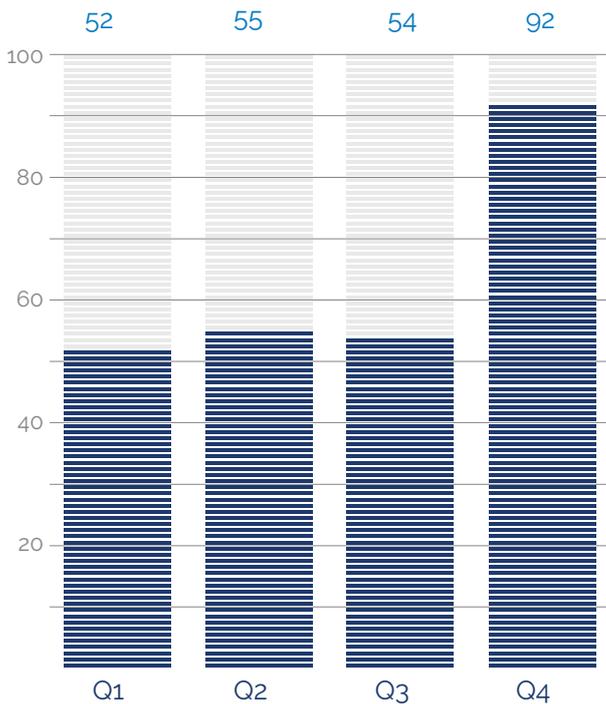
99.9977%



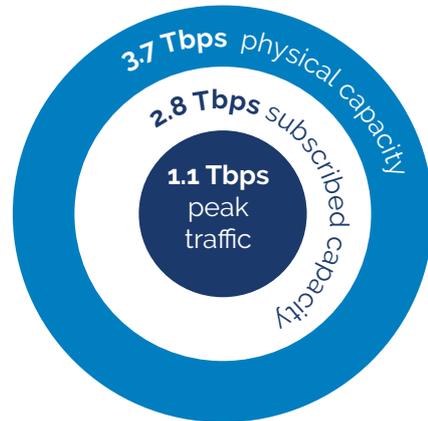
MARSEILLE

99.9998%

NUMBER OF TICKETS MANAGED BY THE NOC



TOTAL CAPACITY *



TOTAL NUMBER OF ROUTES ON ROUTE SERVERS*

	IPv4	IPv6
Paris	93 200	21 500
Marseille	54 800	21 700

*on Dec 31, 2017

1.4 FRANCE-IX TIMELINE



2017

- **350th** member milestone for Paris
- **40th** member milestone for Marseille
- **19th** active reseller worldwide, representing **285 virtual PoPs**
- **1 Tbps** peak traffic in Paris
- **10x100G** ports delivered
- Third infrastructure full upgrade allowing higher density of 100Gbps ports
- Route server filtering policy voted by the members
- **99.9977%** service availability in Paris and **99.9998%** in Marseille
- First step towards automated provisioning of peering services
- Marketplace active with nine sellers
- Winner of the **Best Internet Exchange Innovation** at the 2017 Global Carrier Awards

2016

300

- **300th member** milestone for Paris and Marseille
- **Tenth** active reseller worldwide
- **600 Gbps** peak traffic in Paris
- **100 Gbps** peak traffic in Marseille
- **Marketplace** programme launch with five sellers
- New **blackholing** service
- **100 Gbps** port first provisioning in Marseille
- **Tenth** employee milestone
- Paris office expansion to welcome new employees
- Strategic partnership with the London Internet Exchange (LINX)
- Ranking in the top five IXPs in Europe



2015

- **20th** member milestone in Marseille
- **50 Gbps** peak traffic in Marseille
- **30%** of the shortest Internet paths reachable via France-IX (RIPE study)
- **100 Gbps** port first provisioning in Paris
- Migration of copper to fibre connections
- New PoPs (*Saint Denis; Telehouse 3, Magny-les-Hameaux; Jaguar Network, Marseille*)
- New public **weathermap** and new advanced looking glass
- Deployment of new out-of-band network and security filters policy to improve resiliency
- Partner for the future launch of the **Casablanca** Internet Exchange (CASIX) and the **Senegalese** Internet Exchange (SENIX)

2014



- **250th** member milestone for Paris and Marseille
- **300 Gbps** peak traffic in Paris
- **Sixth** active reseller in France and Europe
- One new PoP (Iliad DC3, Vitry)
- Second infrastructure full upgrade allowing higher density of **10 Gbps** port and **100 Gbps** deployment
- Ranking in the top **10 IXPs** in Europe



2013

- **200th** member milestone for Paris and Marseille
- **200 Gbps** peak traffic in Paris
- **Fifth** active reseller in France and Europe
- Launch of **France-IX Marseille** with the first PoP in Interxion MRS1, Marseille
- **Partner** of the AXIS project with the Internet Society (ISOC) to run regional IXP training sessions in Guinea and Comoros

2012



- **150th** member milestone
- **160 Gbps** peak traffic in Paris
- Free **100 Mbps** interconnection for any TOP-IX and TOUIX members
- **Reseller programme** launch
- First infrastructure **full upgrade**
- Development of in-house information system
- Launch of customer **web portal** (tools.franceix.net)



2011

- **100th** member milestone
- **PANAP** members one-night migration to France-IX in Paris and official closing of PANAP
- **Two new PoPs** (Telecity Condorcet and Iliad DC2)
- Free **100 Mbps** interconnection for any LU-CIX, LYON-IX and SFINX members
- **Fifth** employee milestone

2010



- **Commercial** and **technical** launch of France-IX in Paris
- **Six founding members:** Akamai, Jaguar Network, Neo Telecoms (now Zayo France), Interxion, Google and Bouygues Telecom
- **Six PoPs** operational from day one in Paris (Interxion 1, 2, 5, Telehouse 1, 2, Telecty Courbevoie)
- **Two** full-time employees



2009

- Creation of working group called "**Pheon-IX**" driven by **Neo Telecoms** (now Zayo France), **Google**, **Jaguar Network** and **Akamai**
- Survey suggested a strong expectation for an IXP to federate all French operators in Paris and to provide a high quality of service

1.5 FRANCE-IX GOVERNANCE

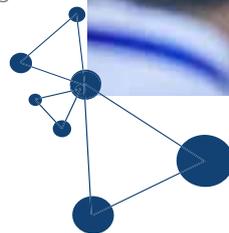


The France-IX organisation guarantees its independence and neutrality. ”

France-IX is based on two entities: an association and a private company. This is done so that one side is a dedicated company that deals with the technical and non-technical activities, while the other is a non-profit association which is the unique shareholder of the private company. This structure guarantees independence and neutrality, as the stakeholders of the private company are members of the association, with each one given a voting right irrespective of its geography, business size or business sector. Members vote annually to elect the board of directors and to validate the accounts of the private company.

The board of the association is elected by the association members during the general meeting. The board appoints the company CEO & President, approves the global strategy and the company annual budget, advises the CEO on strategic issues and, finally, makes sure the company stays true to its mission and uses its assets wisely.

The CEO & President of the company is Franck Simon. He has held this position since 2010. He orchestrates the management team, which consists of a CTO, a CCO and an Office Manager. During 2017, the company went through a re-organisation to strengthen the teamwork, prepare for team growth and align its corporate goals around two major departments: technical (network, systems, IT) and commercial (sales, business development, marketing), as well as administrative support (accounting, office management). The financial, legal, HR and NOC assistance is outsourced to third parties. On December 31, 2017, the company had 11 permanent employees.



	Association	Company
 Meeting	General Meeting	Shareholders meeting
 Board	Executive board	Supervisory board
 Management	-	Executive management

“ Board members represent individuals or corporate seats with no ratio limit. The most important factor for each board member is the ability to represent the diversified eco-system of France-IX both technically and strategically with the highest level of neutrality.

”

The importance of sound corporate governance cannot be overstated, particularly for a non-profit where absolute transparency of operations is demanded by the membership. Achieving a good balance of technical and business expertise from businesses and individuals representing the range of actors with an interest in the success of France-IX is vital.

Board members are aware of the market to identify and collect needs, and to express a vision and contribute to the development of France-IX. France-IX has eight board members, six of whom represent corporate entities plus two individuals.

When the articles of the association were established in 2010, the founding members constituted the first board of directors. There were six seats at that time (now there are eight), all occupied as corporate seats. Even if the articles were flexible with regards the possibility of having both corporate seats and individual seats (without any specific conditions on the ratio between the two), the choice was taken to have only corporate seats initially, not only to help define the strategy but also to help bring strong support to France-IX and contribute to its success. France-IX

grew quickly and became stronger, and in that time board seats have been occupied by both companies and individuals when elections were run.

While there are differences between a corporate seat and an individual seat, there are fewer arguments to maintain such a state, the main reason for the current situation is related to the conditions in which France-IX was created. If we consider what is done on similar IXPs, in terms of board management, we are in favour of encouraging individual seats as the standard moving forward.

To achieve the best possible levels of neutrality, ideally the board will be composed of a mixture of profiles. It is important to note that board members of France-IX cannot be present on competing boards. Indeed, France-IX board members must sign a code of conduct that requires them to declare commercial interests and they cannot vote on issues where a conflict of interest exists.

“ France-IX has eight board members, elected for a three-year term, by the members, to serve the interests of the members. ”

Board members sit for three-year terms before re-election is required. In 2017, four seats were open for re-election. France-IX invites open applications for company and individual seats and in 2017, it resulted into an even distribution of two individual seats and two corporate seats. Christian Kaufmann, Senior Director Network Technology, Akamai Technologies, is the current France-IX President, following his election in September 2017.

Christian has responsibilities covering peering and capacity planning. He also served as a RIPE WG co-chair, a RIPE NCC Executive Board Member and used to serve as the Chairman of the AMS-IX Executive Board. Before Akamai, Christian was Peering Manager at TeliaSonera, and Technical Operations Manager at Cable & Wireless. He holds a Master of Science in Networking as well as various technical certifications, including both a CCIE & JCNIE.

Other members of the board include networking consultant **Clément Cavadore**, Vice President; **Jérôme Fleury**, Secretary, and Network Engineering Manager at [Cloudflare](#); **Benoit Plessy**, Treasurer, and Lead Technical Architect & Peering Manager at [Bouygues Telecom](#); with member support from **Stéphane Bortzmeyer**, Network and Systems Architect at [AFNIC](#), **Yvan Lyko**, Strategic Negotiator at [Google](#), **Nicolas Strina**, Director, Global Infrastructure Development at [Twitch](#), and **Greg Villain**, responsible for Internet infrastructure product and engineering at [Kentik](#).



BOARD MEMBERS 2017



CHRISTIAN KAUFMANN

President
2017-2020



CLEMENT CAVADORE

Vice-President
2017-2020



BENOIT PLESSY

Treasurer
2015-2018
BOUYGUES TELECOM



JEROME FLEURY

Secretary
2017-2020

CLOUDFLARE



STEPHANE BORTZMEYER

Member
2015-2018

AFNIC



GREGOIRE VILLAIN

Member
2017-2020

KENTIK



YVAN LYKO

Member
2015-2018

GOOGLE



NICOLAS STRINA

Member
2016-2019

TWITCH



Corporate seats



Individual seats

1.6 BOARD REPORT

2017 OVERVIEW

On December 31, 2017, the Board of Directors was composed of eight members, all of whom were elected by the association members during the general meetings. Seven out of the eight are French citizens. They work in the two continents where the majority of France-IX members operates: five are based in Europe while the remaining three are in North America. The directors offer technical and business competencies (network, infrastructure, engineering, peering, systems, as well as business negotiations and product development), in the leading business segments of the France-IX membership in 2017: ISP/carrier, content and cloud providers.

In 2017, a code of conduct was created and approved by the current board. This code of conduct helps maintain the level of neutrality required in strategic decision making, neutrality from any business or other board interests.

OBJECTIVES



The Board of Directors has four objectives:

- Participate in meetings (face-to-face and remote)
- Represent the association and be a spokesperson
- Provide a link to the France-IX community, collect needs and expectations
- Approve the global strategy and the company annual budget and advise the CEO on strategic issues and the changing competitive landscape

MEETINGS

Board meetings are held once a month remotely for one hour and in person for a full day twice a year. In 2017, the board held 10 remote meetings and the two face-to-face strategic meetings were held on April 3, 2017, and September 28, 2017 in Paris. In 2018, the board plans to publish its meetings minutes making them accessible to all France-IX members.

Since the board is elected by the France-IX members to serve their best interests, member feedback is highly valued. If a member needs to reach out to the board, they should feel free to contact the board by email: board@franceix.net.



COMPENSATION

Board membership is entirely voluntary. Other than justified travel expenses, board members are not eligible for any compensation in the form of salary, France-IX service discounts or any other advantages at individual or corporate level.



NOTABLE ACHIEVEMENTS OF THE BOARD IN 2017

The Board of Directors determines the main lines of France-IX's strategy. In this capacity, it defines and validates the strategic objectives for the company CEO. In 2017, the approved objectives were:

- Grow Paris and Marseille membership
- Develop the Marketplace
- Guarantee high service availability and grow membership satisfaction
- Develop internal and external reporting (quarterly reports, annual report)
- Grow the company capital to secure its financial position

In addition, the Board of Directors reviewed, discussed and validated various France-IX activities, plans and strategy, with regards to the following:

- The validation of the company annual budget and its execution (new pricing, new offers), the nomination of an external auditor to review the financial accounts
- The validation of the global strategy (IXP partnership, remote peering expansion), in line with the changing competitive landscape
- The follow-up of the evolution of its infrastructure and the validation of its new services
- The evaluation of the pertinence of the articles of the association with regards to France-IX board evolution

1.7 2017 ANNUAL GENERAL MEETING

At the end of September 2017, France-IX held its Annual General Meeting at the Crowne Plaza Hotel in central Paris. As in previous years the General Meeting provided France-IX with an opportunity to provide feedback to its members on its recent and ongoing developments, to ratify decisions impacting the non-profit association and also to provide an opportunity to gather its community with all its partners to network together. More than 160 attendees registered to attend the France-IX Annual Meeting on September 29.

The agenda covered the following topics :

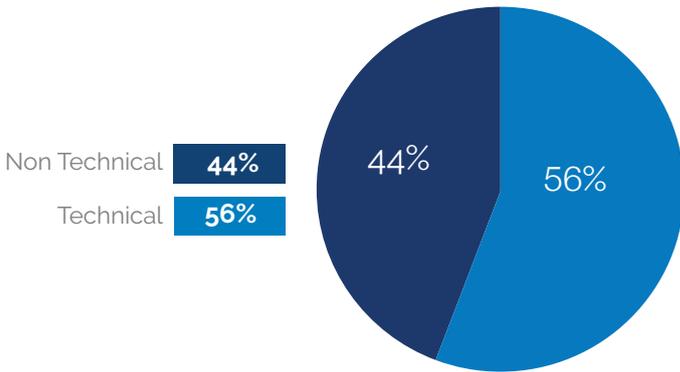
- France-IX marketplace opportunities
- Network traffic intelligence
- Internet in 2020
- Marseille's evolving role in global interconnectivity
- Perspectives of Google Global Network
- Evolution of the data interconnection market in France,
- Future of peering
- NIS Directive
- Status of peering in London and Turin
- Digital transformation in France.

Voter turnout was high, with a record of more than 35% participation and for this first time, two panels were organised: one involving Marketplace partners to cover the uniqueness of their offerings and one with Enterprise members to discuss their digital transformation and how IXP comes into play.

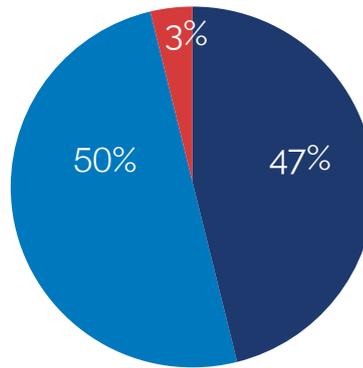


WHO ATTENDED?

PROFILE



RESPONSIBILITY



GENERAL MEETING IN NUMBERS

122



Attendees

75



Attending Companies

14



Presentations

2



Panels

22



Industry Leading
Speakers

4



New Elected Board
Members

6



Sponsors

62%



Loyal sponsors

SPONSORS



kentik



BROCADE



TELEHOUSE
HOME TO YOUR GLOBAL ICT SOLUTIONS



interxion™



Coriant



PUREOPTICS

VOTE RESULTS AND BOARD MEMBERS CHANGES

Online voting has existed since 2014 to enable remote members to vote easily. In 2017, we increased our efforts to make voting even easier for our members with the creation of online voting support. Three weeks prior to the elections (to answer any IT trouble, as well as legal or administrative questions), a new "elector" profile is created in our internal systems to start differentiating between operational technical teams and the main France-IX contact to take part of the votes.

With a voter turnout of 37.4%, the 2016-17 accounts were validated (92 votes yes, 0 vote no, 21 abstentions) and four board members were elected. Here are the newly elected board members:

BOARD MEMBERS 2017



Elected corporate candidates



JÉRÔME FLEURY
CLOUDFLARE



Elected individual candidates



CHRISTIAN KAUFMANN



GREGOIRE VILLAIN
KENTIK



CLÉMENT CAVADORE



The General Meeting also gave France-IX an opportunity to thank outgoing board member Bocar Kane for his dedication and contribution over the past three years.



2 Community development

“

France-IX interconnects several hundred of telecommunications carriers, ISPs, content providers, content delivery networks and all other Internet networks worldwide with significant traffic in the Internet French market.

”

FranceIX
www.franceix.net

**Together,
your Internet,
even better**

FranceIX
www.franceix.net

2.1 OVERVIEW

In business, as in life, we are judged by the company that we keep, and the France-IX community reads like a who's who of the French Internet. From companies who own Internet content, cloud or users, to companies who use these resources, France-IX gathers a wide diversity of businesses with one common objective: to improve the accessibility and the latency of their network in France.



GEOGRAPHY

France-IX members are mostly based in France but a growing number originate from other European countries, the Middle East, Africa, USA and Asia Pacific;

BUSINESS SIZE

France-IX members range from Fortune 100 companies to non-profit organizations;

BUSINESS SECTOR

France-IX members can be classified into more than 20 business segments serving the residential, enterprise, wholesale and public markets.

YOUR INTERNET, TOGETHER, EVEN BETTER

Since the outset our mission has been to make France-IX “The Internet exchange point that opens France to the world” (or rather “Le point d’échange Internet qui ouvre la France sur le monde”). As an organisation we have taken a long journey and experienced tremendous growth, now we feel the time is right to evolve further and concentrate delivering an even more rewarding experience for our members.

Our mission today has evolved from delivering an exchange opening France to the world. Our community now extends far beyond our borders, with that in mind the France-IX team, inspired by its communities, recognised that we have a new mission to deliver “Your internet, together, even better” (“Ensemble, votre Internet, en mieux”). This statement emphasises France-IX’s value perception, unique community identity and its competitive positioning.

DIGITAL TRANSFORMATION AND LARGE ENTERPRISES

The digital transformation process of large enterprises inevitably includes a careful assessment of how applications, databases and computing environments are utilised and how this could be improved so that these environments perform more efficiently to support business goals more effectively. Assessing connectivity is a vital part of the process, particularly if the migration of business critical applications and data to the cloud is part of an enterprise’s digital transformation strategy.

Digital transformation projects are growing in size and scope everywhere. These developments are encouraging large enterprises to join IXPs to gain access to business critical applications. Added benefits include direct access to national and international carriers, and also to non-business critical traffic such as social media and online video, all of which is driving the explosive growth of their Internet bandwidth. In 2017, Air Liquide, LVMH and Airbus joined France-IX peering pioneers embodied by Schneider Electric, Lacoste, Les Nouveaux Constructeurs, Saint-Gobain, Kering and AXA Technology Services.

“ Connecting to France-IX has really empowered Schneider in its fast adoption of cloud technologies,

SAYS LIONEL MARIE, NETWORK INNOVATION LEADER, SCHNEIDER ELECTRIC.

From a few Mbps of traffic exchanged five years ago, France-IX now delivers around 1Gbps of cloud and Internet traffic towards Schneider Electric’s 40,000+ employees based in Europe. Business critical traffic such as AWS, Office 365, WebEx, OVH, zScaler, Akamai, as well as commodity traffic such as Google, Facebook, YouTube and others, is delivered through the France-IX platform, with unbeatable performance, bandwidth flexibility and price. ”

SPREADING THE WORD IN PERSON AND ONLINE

Attracting more than 50 new members on an annual basis in a high-tech niche environment requires a lot of outreach. First, in terms of evangelisation, as peering services are extended beyond traditional boundaries (ISPs, carriers, CDNs), towards cloud and IT users. Second, in terms of geographical scope, as Paris and Marseille have become the two international Internet hubs capable of absorbing the network growth.

In 2017, efforts and energy were made to increase France-IX's visibility around the globe through more than 150 face-to-face meetings with members and partners, 35 conferences and industry events (including four hosted or co-hosted by France-IX), and via seven public speaking opportunities used to raise awareness at international events, including Capacity Middle East, euro-IX, AFPIF and Subsea Connect EMEA.

In addition to direct interaction with potential new members, France-IX featured in more than 50 articles and had interactions with 15 of journalists and business analysts throughout 2017. Furthermore, a fresh approach to content has seen a 35% increase in newsletter readership, a 60% growth of LinkedIn followers and over 350 new followers on Twitter.

France-IX also published its first blog in 2017 covering technical and non-technical matters, with the aim of further improving our communication, interaction and transparency with our members, available at blog.franceix.net.

France-IX would also like to thank our technology PR agency AxiCom for their dedication and professionalism in the on-going promotion of France-IX during 2017 both in France and internationally.



2.2 2017 MEMBERS

NEW MEMBERS IN 2017



PARIS

- Air Liquide
- AIRBUS S.A.S
- AlpineDC SA
- ANTEMETA
- Aqua Ray
- Association Cephalonet
- Automattic Ltd.
- Axess Online
- Believe
- CetSI
- Digital Telecommunication Services IVO
- DIRECT INFO SERVICE
- Djibouti Telecom
- Dropbox
- Ebonyhorizon Telecomunicacoes S.A. - Bitcanal
- EXPEREO
- FranceTV AS43930
- Global Best Brands
- GPLExpert
- Guilab
- Gulfnet
- HELIANTIS
- HISI
- Hongkong Seaga Technology Limited
- IDNet
- iKANO S.A.
- IP Directions
- LPG Holding Corporation
- moji
- NETIWAN SAS
- Netnod - I-Root server
- NSC SOLUTIONS SAS
- NXO France
- ON-X
- Outscale
- PIN LLC
- PT Telekomunikasi Indonesia Int
- RASCOM
- SALESFORCE.COM, INC.
- SES
- SIL Citycable
- SINET CAMBODIA
- SNC MOET HENNESSY
- Sony Interactive Entertainment LLC
- SUPINFO International University
- Synalabs SARL
- Talsion
- Vedege
- Vente-privee.com
- Vidscale, Inc
- Voyages-sncf Technologies
- W3TEL
- Zoreole Services



MARSEILLE

- ANGOLA CABLES
- Djibouti Telecom
- Docapost/SERES SA
- Ebonyhorizon Telecomunicacoes
- S.A. - Bitcanal
- Mauritius Telecom Limited
- NXO France
- PACWAN
- Sify Technologies Ltd.
- Swisscom
- TAQNIA Space Co
- VCTech

MEMBERS WITH EFFECTIVE UPGRADE IN 2017



PARIS

- Acropolis Telecom
- Adista
- Agarik SAS
- Amazon
- Anexia
- APPLIWAVE SAS
- Ariane Network
- AvenirTelematique
- AXA Tech
- Belnet
- Bouygues Telecom
- BSO Network Solutions
- Gulsat Madagascar
- Hexanet
- Hurricane Electric
- Infomil
- Kering
- Limelight Networks France SARL
- LuxNetwork S.A.
- Microsoft
- moji
- Neo Services
- Netflix
- Nexellent
- Octopuce
- Oelis
- Orange AS3215
- Phibee Telecom
- Serveurcom
- Sewan Communications SAS
- SFR
- TAS France
- Trinaps
- Valve Software
- Via Numerica
- Waycom
- Zeop Reunicable



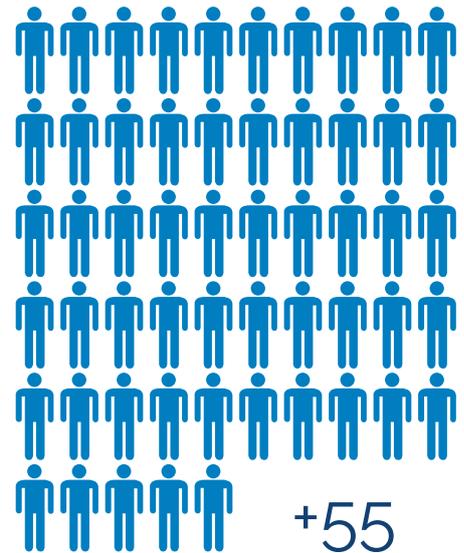
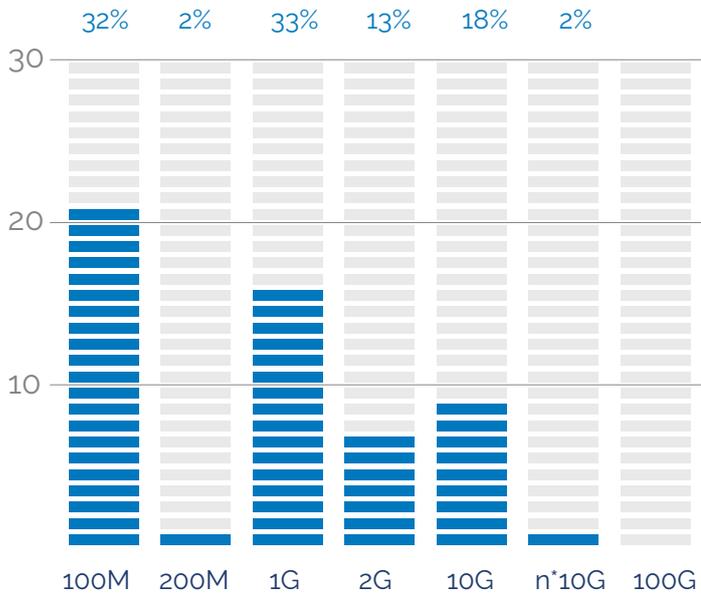
MARSEILLE

- Akamai
- Amazon
- Limelight Networks France SARL

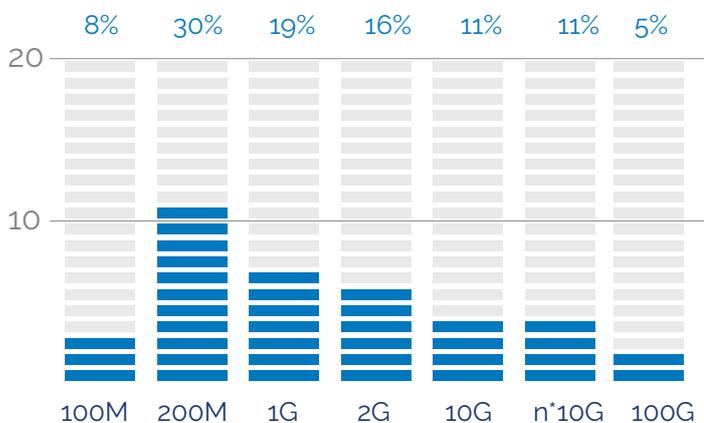


2.3 FRANCE-IX PARIS

MEMBERSHIP ACQUISITION



MEMBERSHIP GROWTH



MILESTONE OF TEN 100G PORTS PROVISIONED

In 2016, France-IX launched its first 100G port commercial offer, by May 2017 the tenth 100G port had already been provisioned. This represents a key milestone in terms of market adoption and traffic growth. This highlights the dynamism of the interconnection market in France in combination with France-IX's maturity level, enabling effective community aggregation and the development of new services.

In 2017, a variety of leading Internet networks increased their France-IX Paris peering capacity via 100Gbps ports including French carriers (Bouygues Telecom and SFR), public cloud providers (Amazon and Microsoft), content delivery networks (Limelight), content and hosting service providers (OVH, Online, and Yahoo), as well as video game developer and digital distribution companies (Valve and Netflix).

“

From major carriers to content networks, France-IX is helping its members to meet the ever growing demand from an online content-hungry public and to expand their capacity in line with future traffic needs without being afraid of reaching saturation point.

”

BACKBONE RENEWAL

In the past three years, France-IX has added around 150 new members and performed more than 100 upgrades. This translates into more than 250 customer ports delivered at all speeds (1G, 10G and 100G). The existing platform was not able to cope with the 100G market demand both in terms of density (2 or 4 100G ports per slot) and in terms of cost since it was impossible to move below €5k for a 100G port monthly rental. Furthermore, the power and space constraints in some data centres mean it would be impossible to add new chassis to increase the availability of 100G ports.

As a consequence, France-IX's strategy for 2017 has been to anticipate Internet traffic growth and always meet its members' expectations when it comes to looking for reliable and affordable options. The focus has been on finding new and innovative ways to increase the density of France-IX's infrastructure while optimising its costs for the benefits of its members.

“

At France-IX, we focus on how to provide our members with what they need to meet the demands of their customers, from capacity to optimal connectivity and market-based prices.”

In terms of backbone renewal moving forward, France-IX has outlined the following programmes:

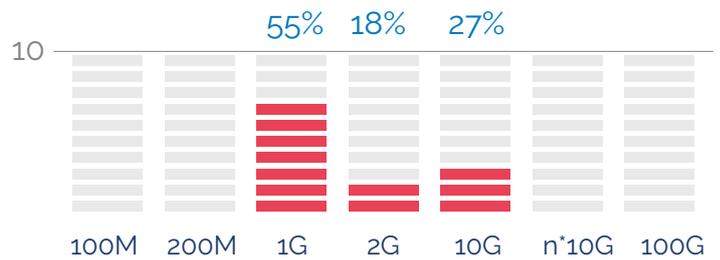
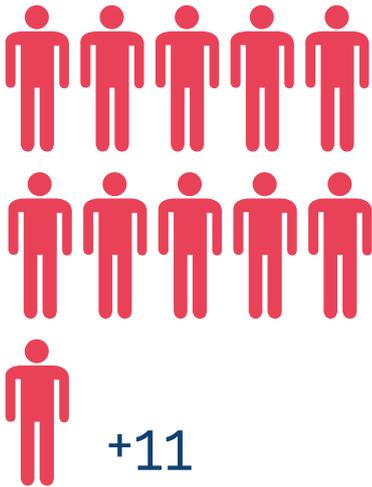
- Short term (2017): high-density 100G infrastructure in the two core PoPs (Telehouse 2 and Interxion PAR5), allowing up to 288 100G ports on the same equipment per PoP;
- Medium term (2017/18): 100G availability in small edge PoPs (Interxion PAR1, Equinix PA7 and Telehouse 3), allowing up to 48 1G or 10G ports and six 100G ports on the same equipment per PoP;
- Long term (2018/19): medium-density 100G infrastructure in medium edge PoPs (Iliad DC2, Iliad DC3, Interxion PAR2 and Equinix PA6), allowing up to 144 100G ports on the same equipment per PoP.

The new infrastructure has been selected based on the following criteria: cost (30%), technical requirements (35%), vendor support (20%), RFP answer clearness (10%) and delivery delays (5%). More than 30 tests were achieved successfully to guarantee the interoperability between current and new equipment and between IP and optical infrastructures. The deployment of the short-term programme started during the summer 2017 and ended in autumn.

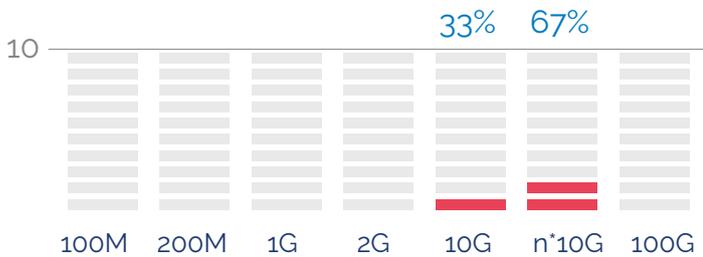
As a consequence, France-IX was able to announce a price decrease of nearly 20% on its 100G ports, starting in 2018, offering a ratio of an equivalent five 10Gbps ports, and a new competitive offer of 20G commitment over a 100G port, available from January 2018.



 MEMBERSHIP ACQUISITION



 MEMBERSHIP GROWTH



SUPPORTING RAPID INTERNET GROWTH IN AFRICA

International Internet bandwidth is growing at a faster pace in Africa than anywhere else worldwide. Between 2013 and 2017 it grew at a compound annual rate of 44%. France-IX contributes to and benefits from this growth since 15% of our Marseille members are African ISPs who represent 30% of the total traffic exchanged in France-IX Marseille (with total traffic peaking at 100 Gbps at the end of 2017).

The rapid expansion of the France-IX community in Africa is due to a combination of new peering members joining and new connections being made via remote peering partners with a presence in Africa. Three new African networks – Angola Cables, Djibouti Telecom and Mauritius Telecom – were connected in 2017, bringing the total number of African members in the France-IX Marseille peering community to five including Seacom and WIOCC. Two new remote peering partners also joined in 2017 - Angola Cables and Telecom Italia Sparkle. Along with existing partner, BICS, these remote peering partners are now enabling more than 70% of African countries with French as their first language to reach France-IX via a remote peering solution.

In addition, 2017 saw France-IX continue its programme of supporting the creation of new IXPs in Africa, the establishment of which represent an important step in fostering Internet-based economic growth. This support mainly consists of providing training, equipment donation and technical assistance. France-IX started this initiative with CASIX in Morocco in 2015 and SENIX in Senegal in 2016, and replicated the initiative in 2017 with Congo.

“

A milestone of five African networks peering at France-IX Marseille has been reached, while 70% of African countries with French as a first language are potentially accessible via remote peering solutions.

”

EXTENDED COLLABORATION WITH THE RIPE ORGANISATION

The peering community is well aware that the RIPE NCC delivers high-quality face-to-face training courses. Courses are open to all RIPE NCC members and costs are covered by the membership fee. Trainers deliver more than 70 courses over the year in the RIPE countries. However, until 2017 courses never took place in Marseille. As part of its community engagement in Marseille, France-IX teamed-up with the RIPE NCC Training Courses to host two RIPE Training Courses: LIR and RIPE database, BGP operation and security training course.

Twenty-two participants from Marseille, Toulon, Lyon, Toulouse, Nice, Paris and other parts of Europe (England, Ireland, Sweden), attended the two training sessions over three days. France-IX hosted the courses at the Business and Management School of Marseille and entertained the attendees in the evenings with our data centre partners Interxion and Jaguar Network.



“

Thank you for this great course in a very pleasant environment with a professional RIPE team and an excellent France-IX host. I am now ready to fine tune my BGP practice. ”

**Thomas Okallo, Telecom Backbone Director,
Flowline Technologies**

“

I have always wanted to see Marseille and did not know what to expect. I felt very welcomed, attendees were engaged and eager to learn. France-IX's organisation was excellent. After the training days, we managed to relax, see the city and get to know the participants better.

”

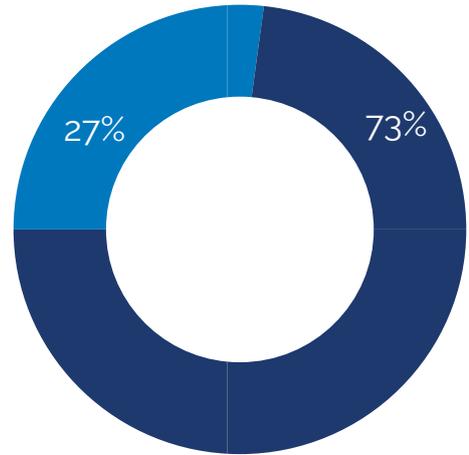
Ferenc Csorba, Trainer, RIPE NCC Training Services



2.5 REMOTE PEERING

Remote peering provides an affordable, fast and reliable method for networks of all sizes wishing to benefit from France-IX services directly from their premises. Thanks to a growing number of partnerships, France-IX can offer members with no presence in either Paris or Marseille the peering options they require without the need to physically co-locate in common points of presence.

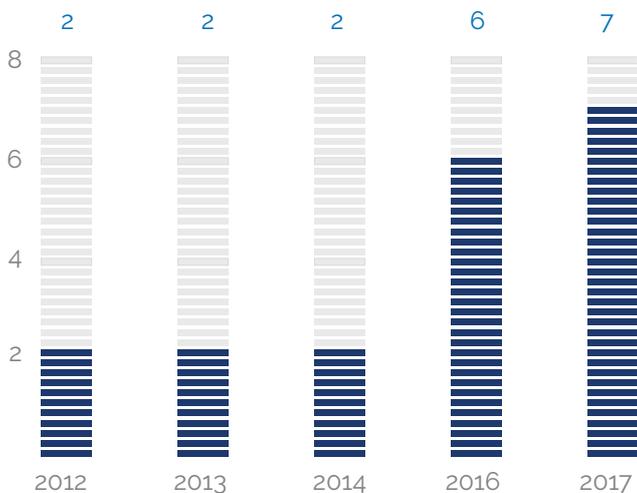
With the attractiveness of IP traffic in Paris and Marseille for French regional networks, for large corporations and for international networks, 2017 was a pivotal year in terms of France-IX membership growth via resellers. The ratio of networks peering indirectly rose from 18% at the end of 2015 to 24% at the end of 2016, reaching 27% at the end of 2017.



New connected Members per Sales Channel
(total Paris and Marseille)

2017	TOTAL	
Direct members	48	73%
Members via Resellers	18	27%
TOTAL NEW	66	100%

REMOTE PEERING PARTNERS ANNUAL GROWTH

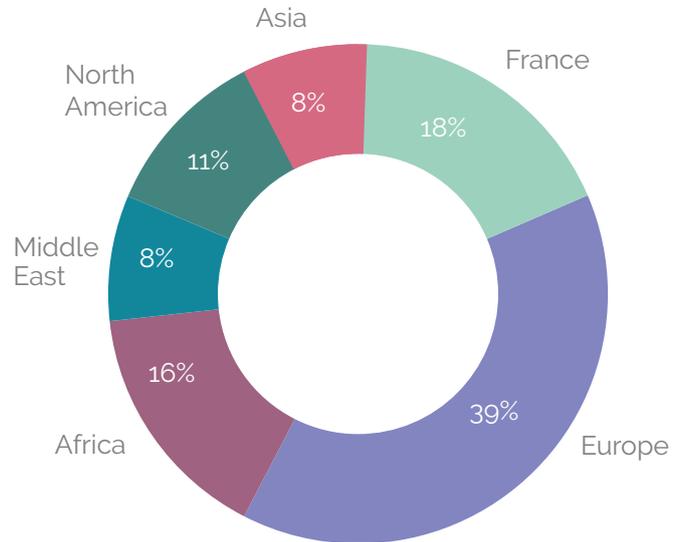


The growth experienced in 2017 is a direct result of the continued recruitment of France-IX remote peering partners, with seven new partners joining during 2017, reaching a total of 19 resellers by year end, representing nearly 60% growth in less than a year.

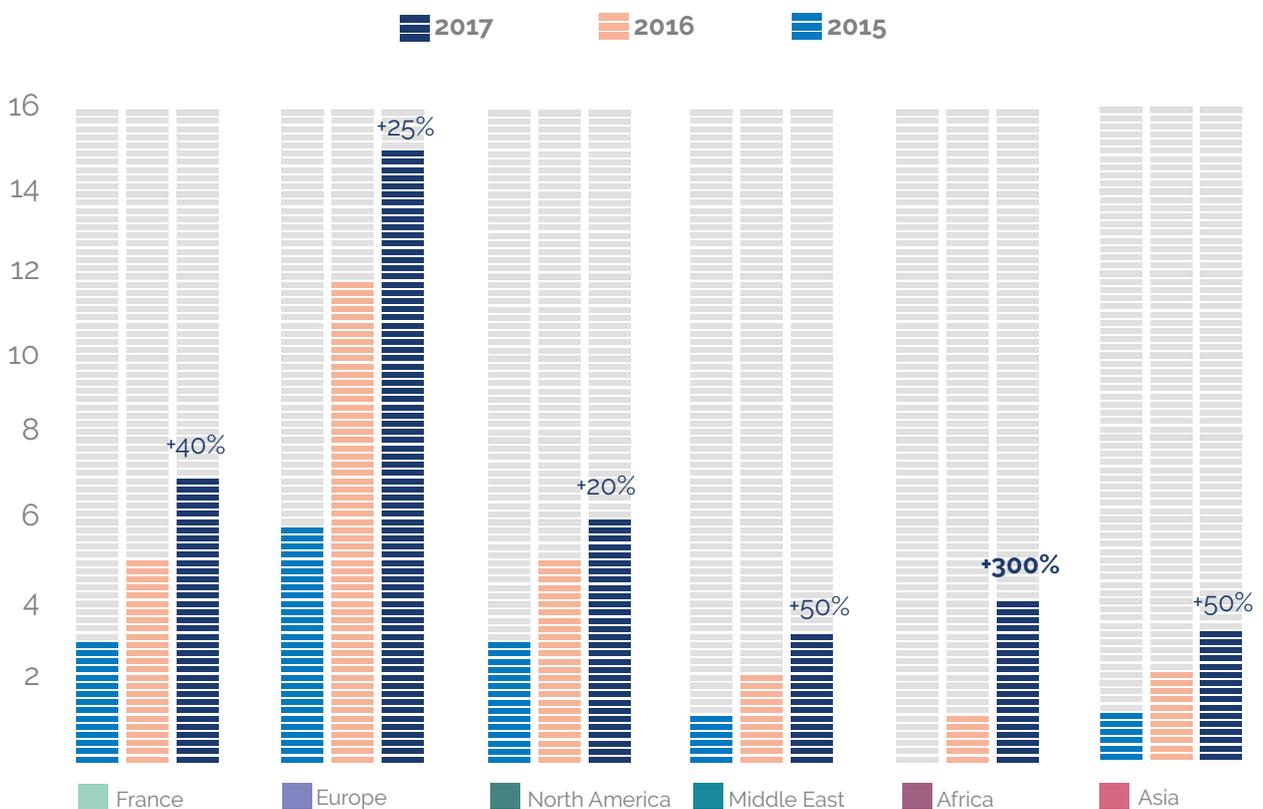
FOCUS ON THE MARKET DEMAND AND FILLING OUT THE GAPS

The strategy put in place in 2016 of focusing on geographies in demand with a lack of remote peering partners continued throughout 2017. These geographies targeted include France (beyond the metropolitan areas of Paris and Marseille), Europe, especially Eastern Europe, Russia and Africa. In 2017 France-IX was also able to rely on connectivity solutions for the first time from its remote peering partners to welcome members located in East and West Africa, without the need to deploy any equipment in Paris or Marseille.

REMOTE PEERING PARTNERS BY GEOGRAPHY (END OF 2017)

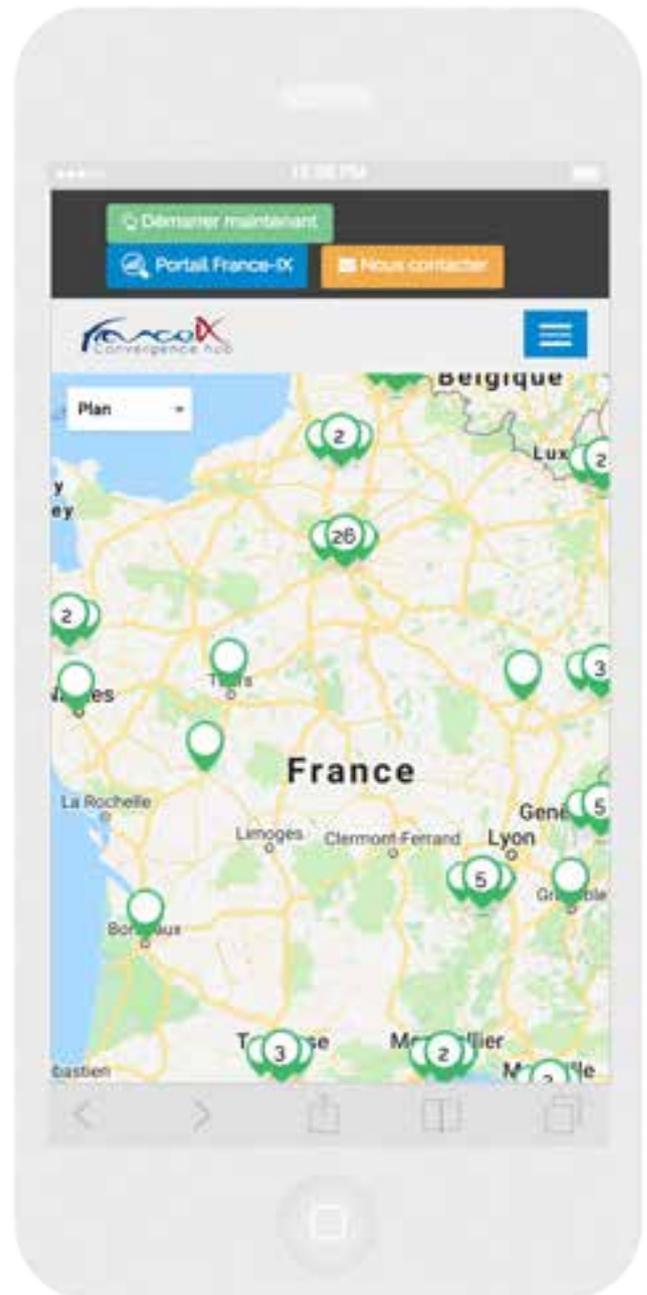


REMOTE PEERING PARTNERS GROWTH BY GEOGRAPHY (END OF 2017)



The challenge in 2017 has been to highlight 285 new virtual PoPs and make it easier for prospective networks to know where to connect. The France-IX team worked on a developing a new online mapping tool called "PoP Finder", which was released as a beta version mid 2017. This tool enables any online visitor to find easily and quickly any PoP in Paris, Marseille, in France and anywhere in the rest of the world where a network can connect to France-IX either directly or via France-IX remote peering partners.

These partners can be contacted directly for a quote through the tool. PoP Finder also shows the precise location of each site, in addition to displaying relative distances from one another.



France-IX would like to thank all of our remote peering partners for their continuous activity and for their efforts to promote France-IX during 2017 in France and abroad.

WELCOME TO AFR-IX TELECOM, ANGOLA CABLES, BLUE INFRA, EDX NETWORK, ENTER, RASCOM AND TELECOM ITALIA SPARKLE.



THANK YOU TO BICS, GTT (FKA HIBERNIA NETWORKS), IELO-LIAZO, INTERCLOUD, INTERROUTE, IP-MAX, IX REACH, NL-IX, PHIBEE TELECOM, RETN, SOFIA CONNECT AND ZAYO FOR OUR LOYAL PARTNERSHIP OVER THE YEARS.



3 Service innovation

“

*France-IX enhances the affordability
and latency of the Internet traffic
exchanged between its members
and thus improves the overall quality
of the Internet in France.*

”

3.1 NETWORK AND TECHNICAL OVERVIEW

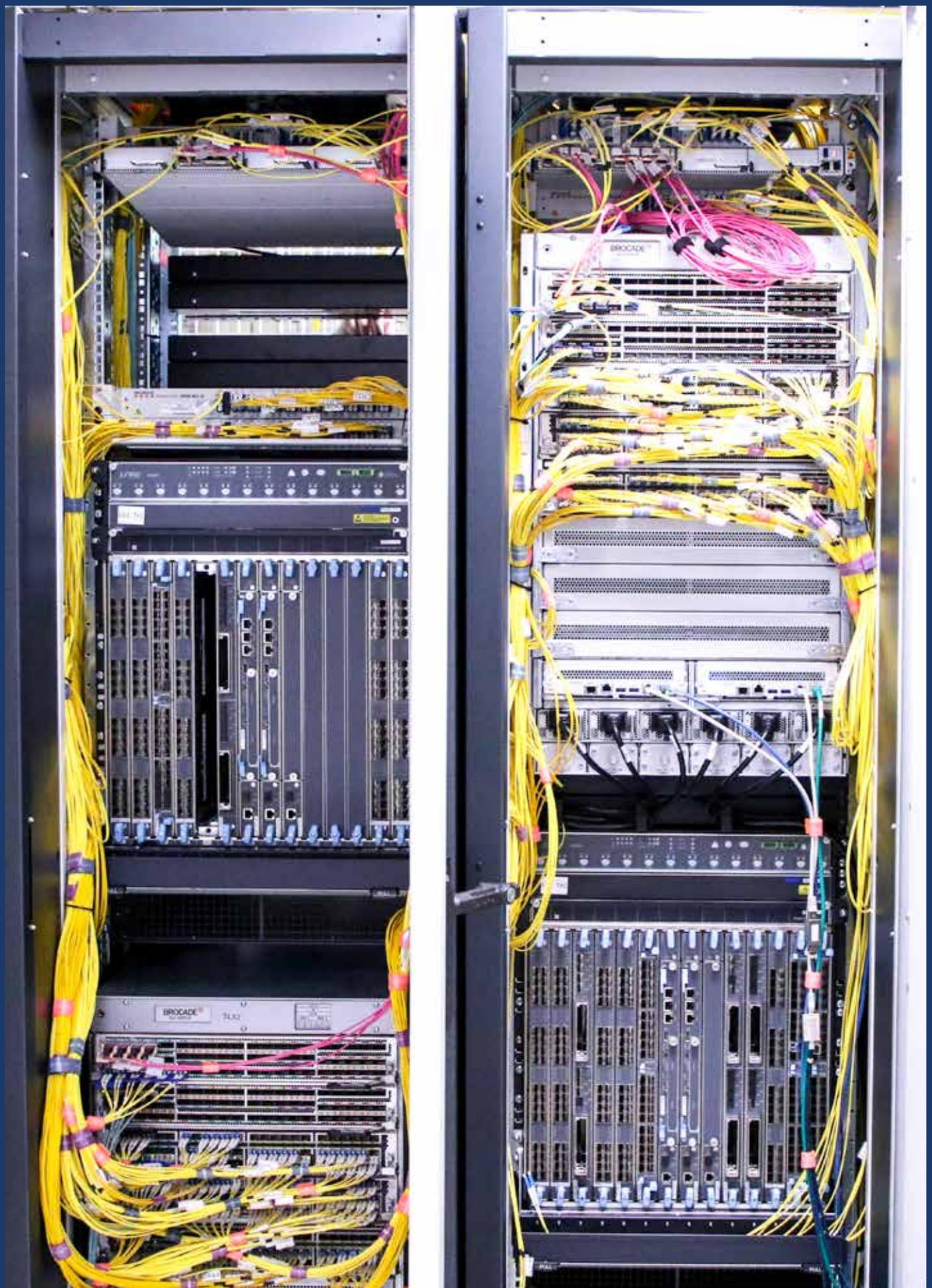
100G STILL HIGH IN DEMAND

The high growth rates anticipated in 2016 continued during 2017. In May 2017, we announced the important milestone of ten 100 Gbps ports delivered. In October 2017, Internet traffic hit a new peak record of 1 Tbps, representing a 45% annual growth.

During 2017, the 100Gbps ports were made available in almost all France-IX points of presence in Paris and Marseille through the addition of new 100G line cards: Equinix-Telecity PA6, Iliad DC2 and DC3, Interxion PAR2 and PAR5, Telehouse 2, Interxion MRS1 and Jaguar Network MRS01. Provisioning takes, on average, three business days, with a pricing strategy that aims to satisfy the cost-consciousness of France-IX members offering a ratio of an equivalent five 10Gbps ports.

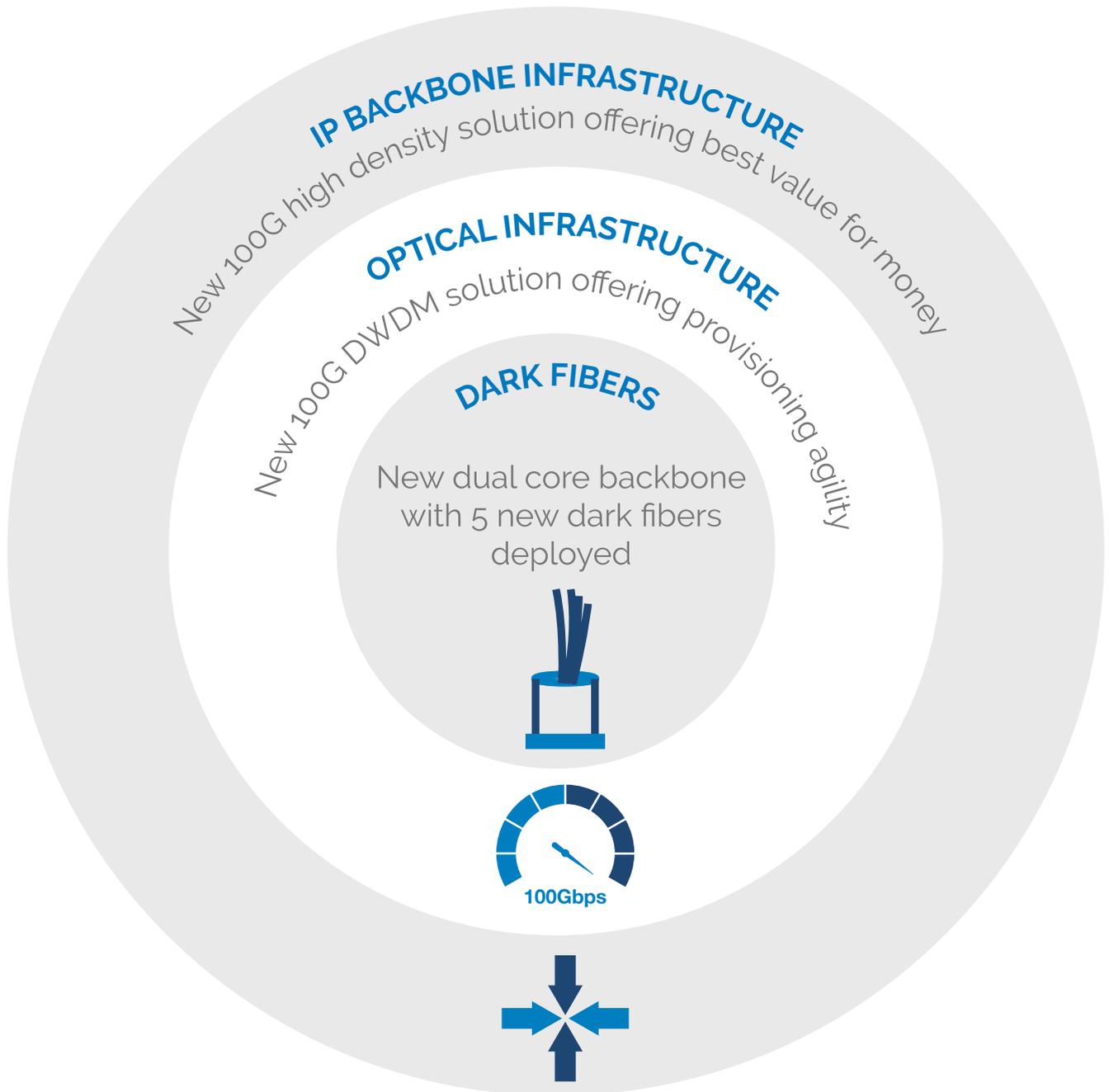
The infrastructure renewal during the summer 2017 enabled us to prepare for an improved 100G pricing positioning in 2018, allowing a near 20% price decrease and a 100G ratio of an equivalent four and half 10Gbps ports.

The first members to sign up for the 100Gbps service were OVH for France-IX Paris and Reliance Jio for France-IX Marseille.



NEW PARIS BACKBONE INFRASTRUCTURE DEPLOYMENT

In preparation for the 100G market demand and to plan for the future, France-IX announced a renewal of the Paris backbone infrastructure during the summer of 2017. During Q1, RFPs were launched and during Q2, this project became intense and required the dedication of the entire technical team and France-IX executive management:



- **IP backbone infrastructure**

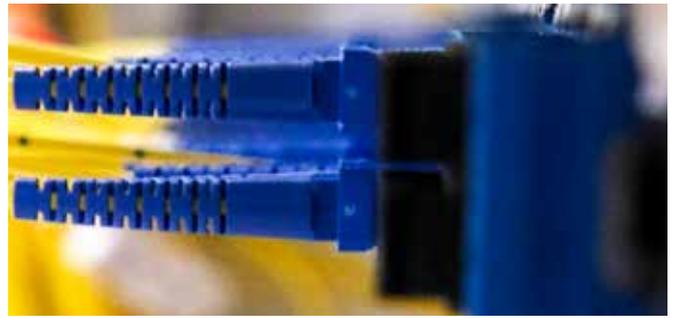
The Juniper EX9200 chassis needed to be replaced with new equipment enabling the required 100G high density, technical compliance and the best value for money per 100G port. Five offers were received; two vendors were short-listed. Finally, Brocade (now Extreme Networks) was selected. A proof of concept trial with this vendor was organised for one month during May 2017 to check the compliance of the equipment and to validate the interoperability with the existing infrastructure. The Brocade SLX-9850, eight slots version, were deployed for the core sites of Telehouse 2 and Interxion PAR5, while the Juniper EX9200 remained in place on the other PoPs;

- **Optical infrastructure**

The current passive DWDM solution based on 10G interfaces was replaced with a new multiple 100G DWDM infrastructure offering simplified network operations. Eight offers were received, three vendors were short-listed based on the RFP criteria and the Coriant Groove G30 was selected;

- **Dark fibre**

Five new dark fibre paths were deployed with new providers Ielo-Liazo and Sipartech, and existing ones Interoute and Zayo, to rebuild a dual core backbone (Telehouse 2 and Interxion PAR5) with every edge PoP dually attached to the core nodes.



Q3 was the time for deployment with some unexpected issues:

- **IP backbone infrastructure**

The SLX-9850-8 slots chassis was deployed during July at Interxion PAR5. Some unexpected issues occurred and the decision was taken to freeze the deployment until full understanding and resolution of these issues;

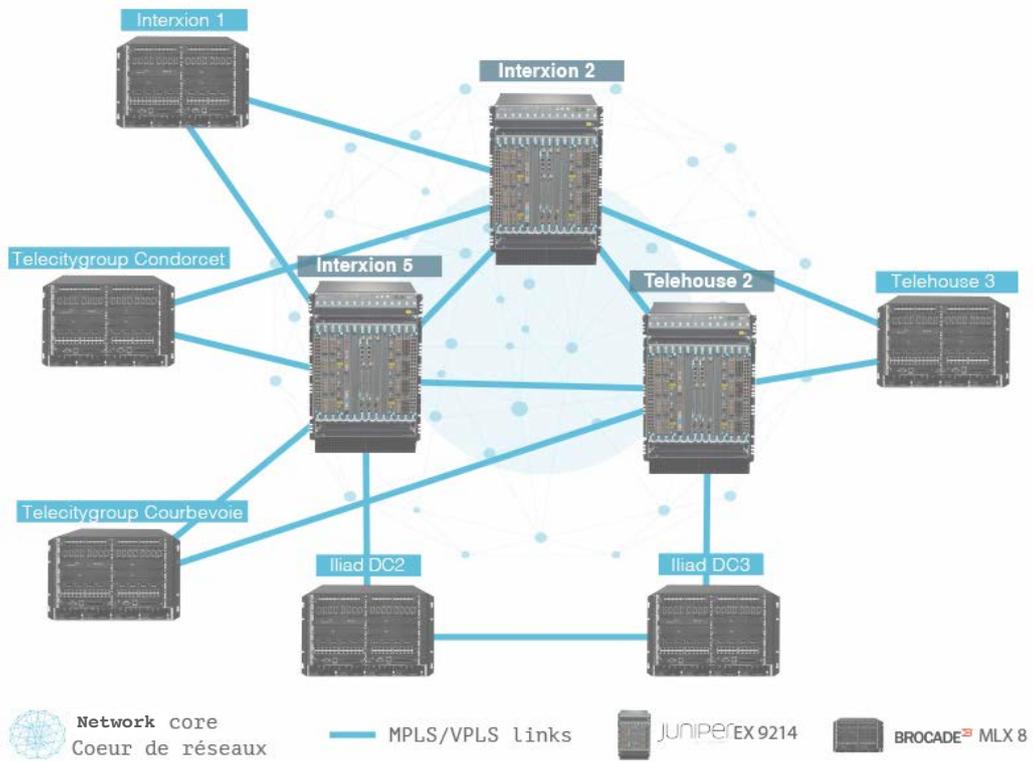
- **Optical infrastructure**

The Coriant G30 boxes were deployed successfully at Interxion PAR5, Telehouse 2 and Interxion PAR2 and the backbone links were upgraded from 20x10G to 4x100G, doubling the capacity of these links.

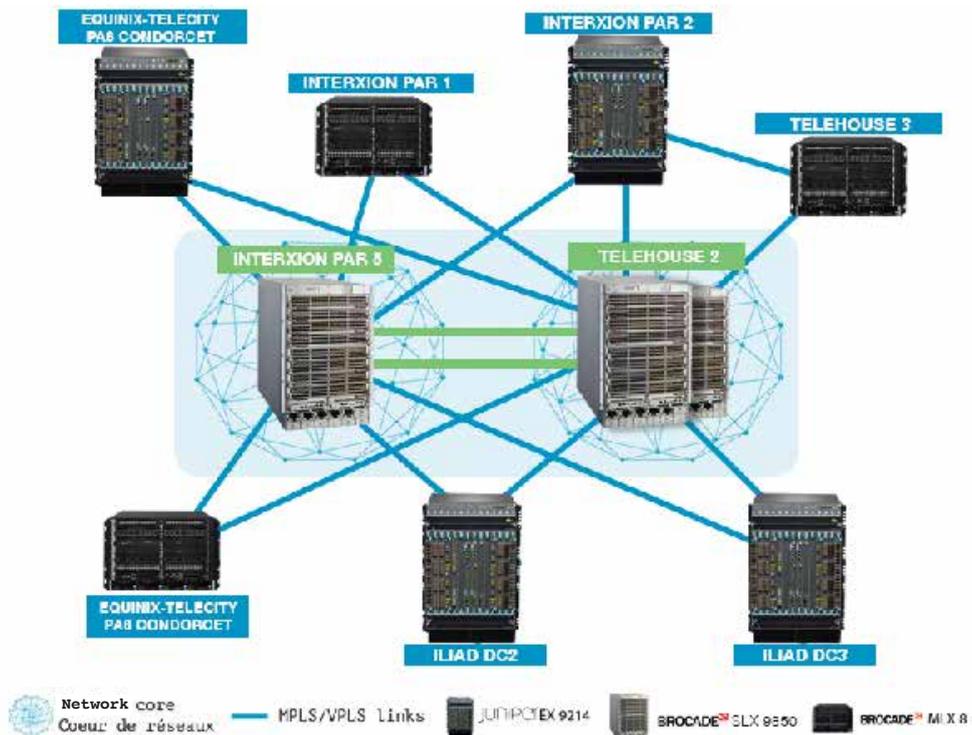
In Q4 solutions were engineered for the backbone infrastructure challenges faced in Q3 and a successful migration was celebrated. After having performed an intensive lab and fixed a severe bug with Extreme, the SLX-9850-8 slots chassis was finally installed in the core infrastructure (Interxion PAR5 and Telehouse 2).



BEFORE



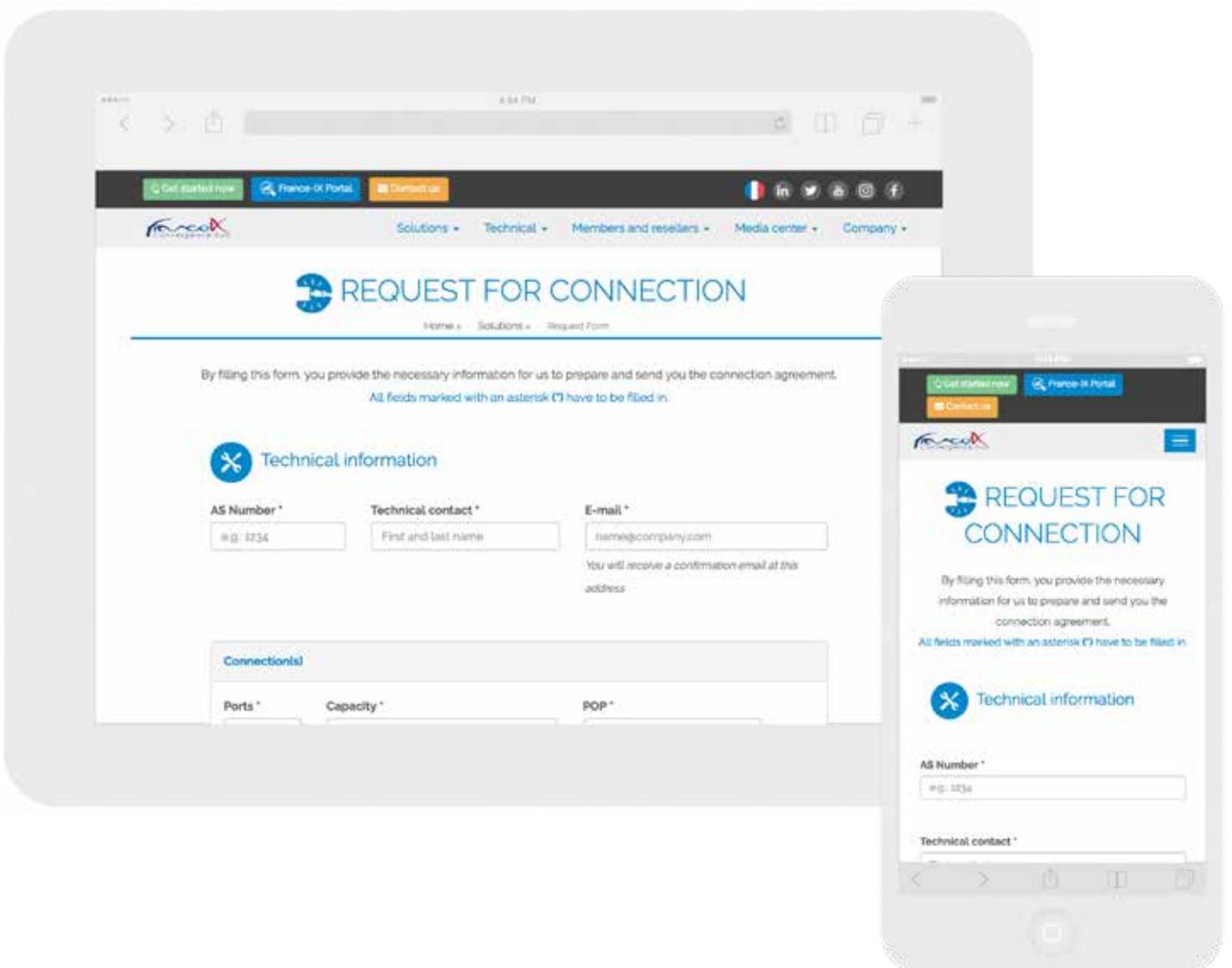
AFTER



FIRST STEP TOWARDS AUTOMATED PROVISIONING OF PEERING SERVICES

During spring 2017, to initiate and finalise the service provisioning, new user-friendly online forms replaced emails and downloadable forms to be sent by email from the prospective members to the France-IX commercial and technical teams. Later in the year, during autumn, the management of patchpanels and the preparation of letters of authorisation (LOA) for new connections were automated. These first steps had two objectives: first, to avoid multiple manual entries from our members or human errors and second, to do the same “stronger” and “faster”.

Since these new online forms feed automatically into the France-IX internal system, this means less manual data entry and a reduced risk of error, which makes us “stronger”. At France-IX, we aim to make everything “faster” because the number of connection requests have increased significantly in addition to the desire of new members to join as quickly as possible. This is one of the first steps in the global scheme of our provisioning process automation to take place in 2017-2019.

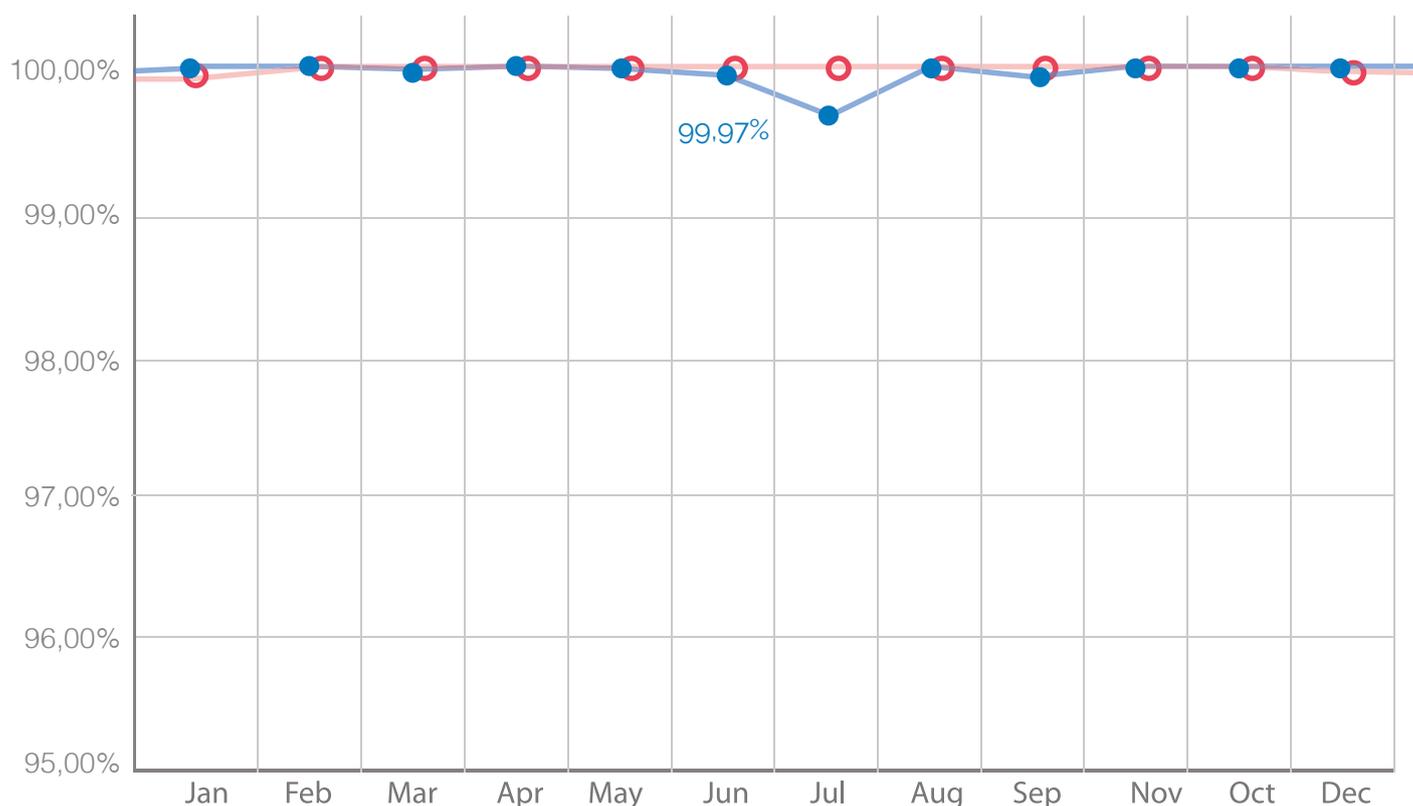


3.2 QUALITY OF SERVICE

STABLE AND STRONG, OUTPERFORMING OBJECTIVES

In 2016, the time was right for France-IX to offer visibility on the provided Quality of Service (QoS) in the Internet best-effort environment where it operates. Probes were deployed, in-house technology was developed and the first measurements on delay, jitter and frame loss were delivered to all members through the France-IX customer portal <https://tools.franceix.net>.

With all these resources in place, 2017 was the year to measure, evaluate and correct. When relevant, new QoS probes were deployed in 2017 to ensure one probe was connected with each piece of network equipment (rather than having one probe per PoP). The platform stayed stable and strong, outperforming every single objective in each city through the year.



ANNUAL SERVICE AVAILABILITY

 Paris **99.9977%**

 Marseille **99.9998%**

CRYSTAL-CLEAR COMMUNICATION

In 2017, we improved our notice period to announce any maintenance and planned works: moving from five business days to 10 business days ahead of planned work. Maintenance and planned works are always executed during non-business hours in case of direct impact of members traffic.

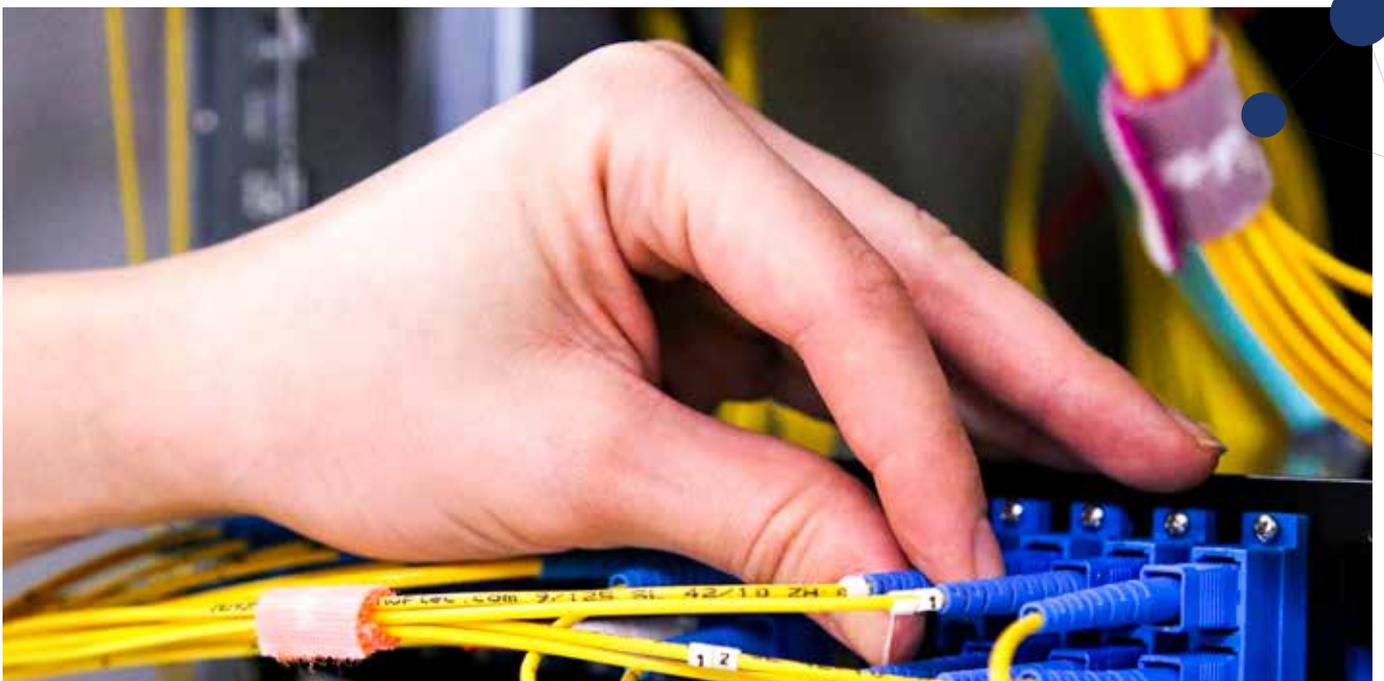
In the event of an outage, incident or degradation of the France-IX Quality of Service, France-IX will answer member enquiries within 15 minutes, update the impacted member(s) within the first hour and issue regular progress updates until the end of the incident. Honesty, transparency and clear messages are the key to our technical communication efforts.

Furthermore, every quarter, the France-IX Technical team issues a report, summarizing the operations carried out on France-IX infrastructure, irrespective of whether they impacted the service availability. Such reports also include information of outages/incidents when appropriate.

In 2017, France-IX dedicated additional time and effort to write a Quality of Service document, which sets out the service levels for all services supplied by France-IX under the General Conditions of its Connection Agreement for the provision of peering services.

The QoS document gathers all of the resources, processes and objectives surrounding the services delivered by France-IX, aiming to guarantee the highest quality to its communities in Paris and Marseille. The document is available online on France-IX website to all current and prospective members.

“
We have written what we do and we do what we have written, this is our promise of quality to all our members.
”



3.3 SERVICE IMPROVEMENT: ROUTE SERVERS FILTERING

FILTERING NOW AVAILABLE

In Q1 2017, filtering on route servers was announced and deployed during Q2. France-IX route servers in Paris and Marseille started tagging routes with BGP communities depending on their IRR and RPKI/ROA validation states. Several IRR in addition to the RIPE database and a local instance of the RIPE RPKI validator were used to ensure accurate data.

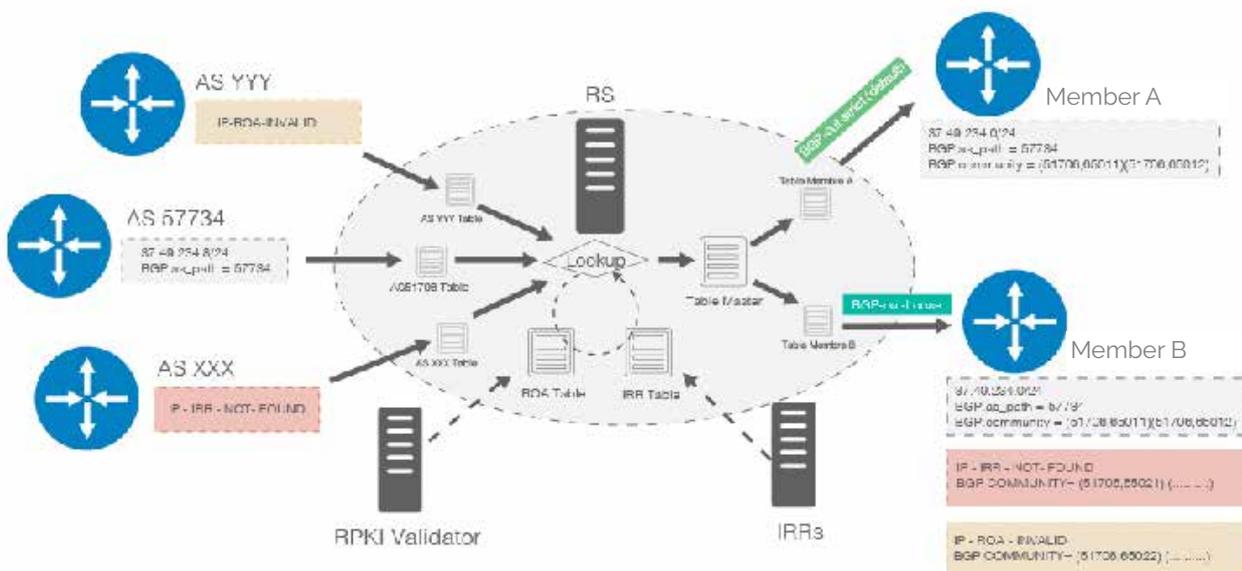
At that time, no action was taken to drop routes on the route servers, allowing members to easily filter routes based on these communities and take the relevant actions for their network.

FILTERING POLICY VOTED BY THE COMMUNITY

During the 2017 general meeting, some debate arose regarding the filtering policy France-IX should adopt.

In November, an online vote was organised inviting all active members and resellers to give their opinion. With a voter turnout of 33%, 110 members/resellers (out of a total of 331) expressed that they would prefer to have strict filtering by default, dropping routes based on their IRR and ROA validation states.

France-IX announced the various steps of implementation from December 2017 until February 2018, going from proactively contacting members announcing invalid prefixes, to enable IRR and RPKI/ROA filtering by default on both route servers by early 2018 and later on during 2018, working on providing a “check tool” in the France-IX customer portal.



3.4 MARKETPLACE

PARTNERSHIPS REINFORCED

In 2017, France-IX's Marketplace took a new step of its development by adding three new sellers and one new category of non-peering services. This strengthened the Marketplace offering in terms of diversity of services and providers, offering a greater choice along with cost efficiencies.

France-IX's Marketplace was launched in 2016 with 6 sellers: Hurricane Electric, Kentik, Orange International Carriers (AS 5511), Orange Wholesale France (AS 3215), Telecom Italia Sparkle and Zayo. During 2017, Expereo/Border 6, Net1C and Hopus came on board.

Expereo/Border 6 BGP optimisation solution can improve the performance and reliability of Internet networks and can be provided with automated CDR management, a DDos automation tool and detailed reporting for future planning and optimisation.

Net1C offers high quality voice termination services through its own switching infrastructure as well as its French and international Tier 1 carriers' interconnections. A-number and origination location based billing is supported, as well as IPv4 and IPv6 SIP. Net1C is the first seller to provide voice services on the marketplace.

Hopus IP transit service provides an innovative approach to Internet content providers and access providers. Its distinctive pricing model means only outbound bandwidth is charged and no commitment is asked. Its overprovisioning policy along with the availability of key routes enables the company to provide the best guarantees. Hopus is the first seller to date to provide this type of partial IP transit service in Europe.



FIRST GLOBAL CARRIER AWARD RECOGNIZING THE MARKETPLACE INNOVATION

In October 2017, France-IX won the award for Best Internet Exchange Innovation at the Global Carrier Awards 2017. The committee rewarded France-IX for its innovation in the launch of its Marketplace in 2016. This new programme adds value to all France-IX peering members by enabling them to buy IP related services easily, cost-effectively and in record activation times. The innovation lies in how the programme disrupts the traditional IXP business model.

The Global Carrier Awards recognise innovation, vision and excellence across the global and regional Data Centre and Internet Exchange market. The judging panel, comprised of telecoms analysts, industry experts and the senior editorial team of Capacity magazine were impressed by the uniqueness of the France-IX Marketplace; the diversity of services it offers such as anti-DDoS, IP transit, network traffic intelligence solutions and remote peering; and the competitive advantage it delivers for Internet professionals and infrastructure buyers. Agility, flexibility and cost savings are key to business success, and this award is testimony to how the France-IX Marketplace helps both its peering members to get the most from their connection and also Marketplace sellers to get access to the largest IP community in France, in one place.





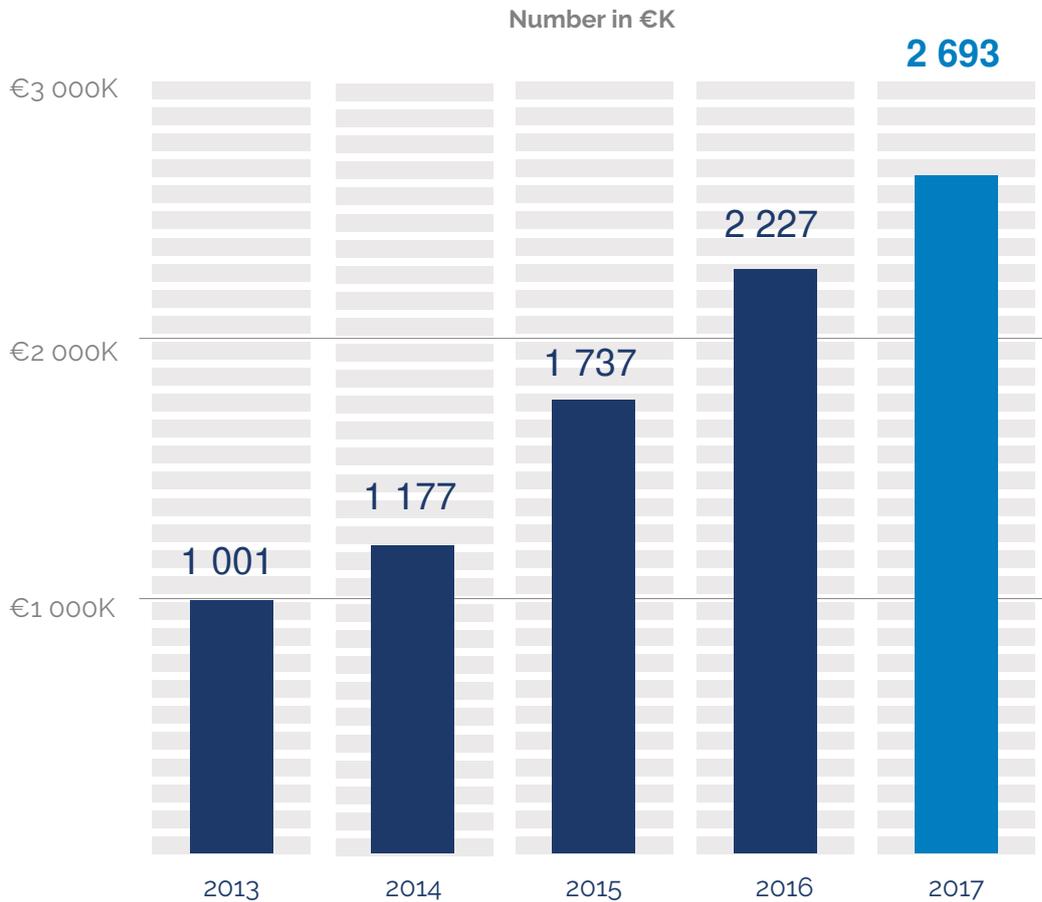
FranceIX
Convergence hub
www.franceix.net

4 Financial report

“ France-IX is a member-based organisation, able to sustain its operational expenses in the long run without threatening the company solvency. ”

4.1 FINANCIAL OVERVIEW

France IX Services closure of accounts is effective every 30th of June. The accounts are presented to the France-IX community every year during the annual meeting where members are given the opportunity to place a vote of validation. The numbers shown in this report relate to the time period of 1st of July 2016 to 30th of June 2017.



Revenues for France-IX continued to grow in 2017, increasing 21% year-on-year, closing at **€2693K** globally, while the total invoicing for the entire year was **€3253K**.

On 1st of January 2017 prices for 1G and 10G ports were decreased by 15%, while pricing for the 100G ports remained stable in 2017.

A tender was issued in November 2016 for the renewal of switches/routers at core sites, and also a redesign of the optical infrastructure both dark fibres with new optimized paths and brand new active Coriant DWDM equipment to bring nx100G to the core interconnection replacing the former passive DWDM nx10G equipment. The new core backbone was deployed during spring and summer 2017, leading to the replacement of the Juniper EX9200 hardware with Brocade/Extreme SLX, enabling much more port density for the 100G connections.

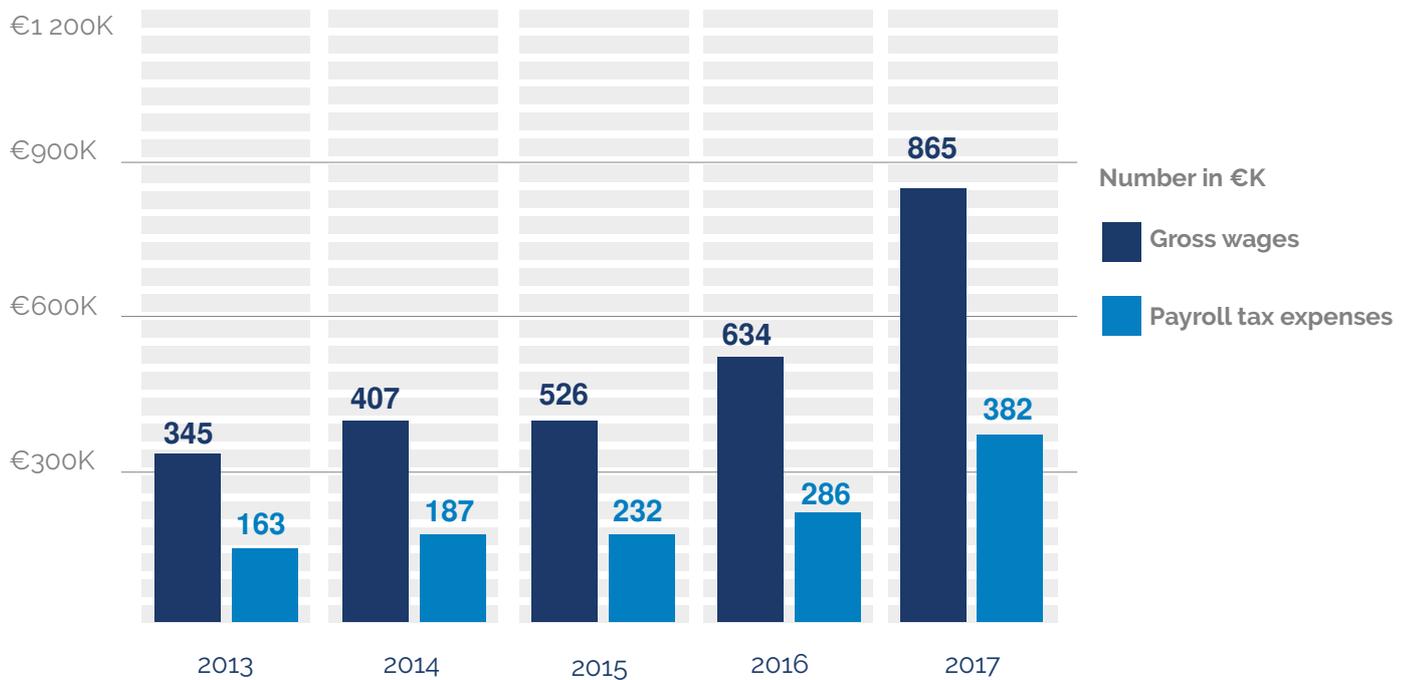
OPERATING EXPENSES

OPERATING EXPENSES	2017/2016	2015/2016
Equipment - leasing (switches, servers)	392 222 €	238 808 €
Intermediary fees (lawyers, outsourcing of human resources management, fees for hiring new people, press agency)	124 732 €	86 586 €
Premises - Rent	123 574 €	71 607 €
Equipment - buying (WDM MUX, WDM optics, Out-of-band) Intermediary fees	116 132 €	141 834 €
Partners (NOC, providers)	103 038 €	141 230 €
Travel & transportation expenses	99 960 €	89 130 €
Telecom expenses	52 210 €	36 860 €
Maintenance	34 704 €	1 568 €
Office supplies, furniture & others	23 194 €	12 789 €
Insurances (equipment, premises, civil insurance)	18 319 €	11 477 €
Total	1 139 009 €	916 952 €

The main increase of the leasing cost is related to the acquisition of the new Brocade/Extreme chassis for the core PoPs, as well as adding line cards in some existing chassis. The costs of leasing for the equipment used by France-IX still does represent the first expense among operating expenses.

Intermediary fees have increased, both related to the fact that more lawyer resources have been required to write up contract deals, and also as fees to be paid in relation to talent acquisition for France-IX team.

France-IX moved to larger premises during 2016, meaning full rent occupation was only effective in 2017, leading to an apparent increase of this fee in 2017.



MANPOWER COSTS

Human resourcing and staff expenses represent the largest element of the France-IX budget. Gross wages were €1247 K (including wages and taxes) in 2017, however, the ratio of employee resourcing versus turnover remained the same. All level2 and level3 technical teams (technicians and engineers) in addition to commercial and marketing teams are full time France-IX employees, while the 24/7 NOC, accounting team, legal department and public relations support are all outsourced to third parties.

CASH FLOW

In 2017, the cash flow position continued to grow standing at more than €550 K by end of June 2017 (versus €400K for the previous year). Members' payment terms increased up to 51 days up from 30-45 days, meaning that some significant efforts have to be made both by France-IX members to pay in due and by France-IX investing in more human resources to tackle members not respecting the conditions of payment.

CAPITAL INCREASE

The last capital increase was made in 2016 resulting in retained capital of €250K (done by incorporation of benefits). There was no justification to continue with capital growth in 2017. Retaining capital at this level enables France-IX to deliver guarantees to our financial partners and providers.

Together, your Internet, even better.

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