

20  
23

2023  
ANNUAL REPORT



Internet  
Association  
of Australia

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## CEO REPORT



### NARELLE CLARK

This year has been a year of consolidation for IAA, and one we are proud of, once again. We broke the terabit barrier (in aggregate) across our network of exchanges, and we've steadily added more and more content as well, meaning ASN 10084 pushes outwards in the order of a petabyte per day. Of course, this also means our 400Gbps upgrade to NSW is hotly anticipated, and as I write, the switches have been received and have passed initial testing. It is, therefore, only a matter of weeks before we start running them in with live traffic! These ports will be available to Members across every POP in NSW, which will be a great investment for the future.

**“ Our nice, shiny new portal has run beautifully throughout the year and new features are being added all the time. ”**

We're inching closer and closer to a fully automated system. Members can now manage their MAC addresses and order new services with the portal happily generating the appropriate config behind the scenes. Of course, our Tech Team is still keeping a close watch for bugs and gotchas just to be sure nothing turns nasty. Luckily, and this is mostly due to the fine code base generated by Nick and Kyle, we haven't seen anything untoward so far.

We've also worked through the numbers for a new IX, and found that, in partnership, we will be able to make TAS-IX happen. There will be two points of presence and we plan to

push content through as well. Over the last year, we've also had to rationalise some older POPs in other exchanges, as Members have moved on to other locations, meaning in at least one example we were the only ones using the switch. We will soon say goodbye to others as they become uneconomic and happily, we will open new ones in Adelaide (NextDC A1) and Perth (NextDC P2) soon. We are happy to go wherever our Members want us to go, so please don't hesitate to be in touch if you have a site where you need services. SA-IX also saw some upgrades this year to improve throughput and retire some old switching gear.

Our events calendar has been nicely full this year. It's been lovely to see our Members in person across the country: we've enjoyed some great topics and plenty of fabulous social catch-ups, from celebrating NSW-IX's tenth anniversary of successful operation to a deep dive into the way the network time protocol works – or doesn't, as the case seems to be! The IAA Systems program received rave reviews; with feedback that the program hits the mark really well. We'll continue offering a healthy combination of in-person and online events over the coming year, and get as many recordings as possible online for posterity, too.

Advocacy has similarly had a full plate this year with the NBN SAU dominating our attention, as well as numerous risk and security related issues. We continue to build our relationships with government, meaning they call upon us for education sessions on how the Internet works. We're now serving on more technical forums and working groups to do with the mechanics of

implementing regulation. Member input is always valuable on this front as we always emphasise to regulators the impact on smaller players, and this saves our Members time and effort in tracking the proposals themselves.

Once again, I am proud to be part of this Association, of my team's achievements, our Board's generosity with their time and knowledge, and of course of our Members: your success is our success!

**Narelle Clark**  
IAA CEO

## MESSAGE FROM THE CHAIR



### MATTHEW ENGER

#### IAA Chair

I am pleased to report a year of action that has drawn us closer to our goal of operating Australia's exemplary internet exchange platform. Our Association, under the leadership of our CEO, Narelle Clark, continues to grow and make significant achievements to benefit our Members and industry. For instance, our technical team has rebuilt our old portal, including various features such as provisioning automation to facilitate easy service ordering and rapid technical updates.

Running efficient and equitable exchanges was our foremost priority this year. The Board believes that a renewed focus on excellent network performance will enable us to provide long-term value for our Members. Thus, we invested in new technologies for delivering higher speed options in 2024 in all our points of presence in NSW, meaning all IX Australia NSW POPs will see 400Gbps.

**“ This new technology investment will drive membership growth and prepare NSW-IX for the next wave of content providers ”**

This new technology investment will drive membership growth and prepare NSW-IX for the next wave of content providers seeking a larger capacity to pass packets to our Members, enjoying the advantages of peering on our network.

Last year I indicated we were looking at expanding into the Northern Territory as well as Tasmania. While NT is not yet stacking up, we have managed to partner with one of our Members and our Tasmania exchange will be online in the next 6 months. We already have had interest from a number of existing Members and content providers to join the exchange and are working to try and connect as many Tasmanian businesses as we can to save them from having to send data back to Melbourne to only be looped back again, reducing costs and latency for Member traffic and improving their customers' experience.

Our Events Team has run a number of events this year, including a celebration of NSW-IX's 10th birthday. It was fantastic to have so many Members join us to celebrate this milestone, as well as join in the Convergent event series throughout the year. The session on the Network Time Protocol, which was held both in Melbourne and online, shook the very foundation of what many people thought was a done deal when it comes to NTP time synchronisation. If you didn't make any of our events, I hope you will join us for one of our Christmas functions which are being held in every state we run an IX.

Our Advocacy Team has continued to go from strength to strength and have responded to way too many NBN SAU updates, along with a multitude of government legislation requests for comment and numerous working group meetings.

Many of our Members are small providers who cannot devote the time to engage with so many consultations, so it represents a great resource for our Members to use this channel to express their point of view and help shape the landscape we all play in. If you have any interest in this area, we welcome your input.

In closing, I wish to thank the Board who have voluntarily helped IAA over the past 12 months. My Deputy Chair, Brett O'Hara, and our other Members, David Hooton, Daryl Collins, Matthew Moyle-Croft, Richard Thompson and Nathan Brookfield.

While we do have a number of terms expiring at the AGM, I want to thank you for all you have done over many years and how you have helped to get the Association into such a strong position as it is today. I welcome the opportunity for Board renewal this offers us and encourage those interested to stand.

I look forward to seeing you, our Members, at the various Christmas functions.

**Matthew Engar**  
IAA Chair

*“ Our Association, continues  
to grow and make significant  
achievements to benefit our  
Members and industry. ”*

## IAA BOARD

### TABLE OF ATTENDANCE

DIRECTOR	ELIGIBLE	PRESENT	APOLOGIES	ABSENT
<i>Matthew Enger</i>	8	8	0	0
<i>Brett O'Hara</i>	8	8	0	0
<i>David Hooton</i>	8	7	1	0
<i>Daryl Collins</i>	8	7	1	0
<i>Matthew Moyle-Croft</i>	8	8	0	0
<i>Richard Thompson</i>	8	8	0	0
<i>Nathan Brookfield</i>	8	8	0	0

Meetings held between October 2022 - September 2023



## BOARD

A robust and varied team possessing a wide range of complementary knowledge, skills and backgrounds.



### MATTHEW ENGER

#### Chair

Matt has significant experience working in not-for-profit organisations, being a volunteer in the Scouting movement and having business experience. He is the owner of Leap Telecommunications, a small provider and an up-and-coming residential Internet provider that prides itself on delivering high-quality Internet services to its customers.

Having already supported IAA in a number of ventures, Matt was a welcome addition to the Board in January 2020 and continues to serve the Association and its members.

**Board Committees** ●●●●● | **Appointed** 19 October 2022



### BRETT O'HARA

#### Deputy Chair

Brett has had a significant career in the Australian Internet industry, working as a Network Engineer for over 25 years across various telecommunications companies, large and small and currently works as a senior IP engineer.

Brett joined the IAA Board in 2019 and hopes to continue serving Members and helping the Board achieve future goals and positive outcomes for the Association.

**Board Committees** ●●●● | **Appointed** 27 October 2020

### Committees

- Membership Committee
- Technical Review Committee
- Finance and Audit Committee
- Public Policy Advisory Panel Liaison
- Regional IX Committee
- NZIX Committee representative



**DAVID HOOTON**

**Field Solutions Group**

A specialist in developing and commercialising software automated networking solutions, David has built his career on creating networking products and services that enable customers to control their own destinies.

Now that the Board has moved into a primarily strategic role, David is focused on building more diversity and mentoring younger Members interested in becoming Board Members.

**Board Committees** ● ● ●

**Appointed** 27 October 2020



**DARYL COLLINS**

**Akamai**

Daryl is based in Adelaide and works in Akamai’s network architecture team. His key interests are in internet interconnection and subsea cable networks. Before Akamai, he spent 20 years working in the Australian ISP industry. Daryl joined the IAA Board in 2018 and has continued to contribute to the Association’s work to benefit the Australian Internet industry.

**Board Committees** ● ●

**Appointed** 17 November 2021



**MATTHEW MOYLE-CROFT**

**Professional Representative**

Matthew has worked in the Internet industry in Australia and overseas for the last 25 years. He has worked with internet exchanges on all inhabited continents and was previously Vice President of the Seattle Internet Exchange.

Joining the IAA Board in 2018, Matthew has helped guide the organisation through considerable change in the last two years. He hopes to continue his work as a Board Member to ensure IAA continues to be strong into the future.

**Board Committees** ● ● ●

**Appointed** 27 October 2020



**RICHARD THOMPSON**

**Professional Representative**

Richard has spent the past eight years working for Cloudflare, a network that is not only present on hundreds of IXPs globally, but one that also plays an active role within those IXP communities. While starting as a Network Engineer, he has grown into a leadership role that sees him managing engineering teams responsible for ensuring that Cloudflare's global network edge is both highly performant and reliable.

Richard joined the IAA Board in October 2020, with hopes of assisting IAA and its members to achieve and further their goals.

**Board Committees** ●

**Appointed** 17 November 2021



**NATHAN BROOKFIELD**

**Professional Representative**

Alongside his numerous entrepreneurial and technical interests, including as founder of Simtronic Technologies, and having a radio and network engineering background, Nathan has had a lengthy career with IAA, serving first between 2015-2020 as Director and Secretary. Stepping down in 2020, he took a break to focus on business and personal responsibilities. He then returned fresh in 2022 to continue his contribution to the community with a vision to help further the Association with better services, offer more training, advocacy and events that are designed to further the development and growth of our Members, whether by social networking or through schemes and conferences promoted or run by the Association directly. Nathan now serves on our Technical Sub-committee and on the NZIX Committee.

**Board Committees** ●

**Appointed** 19 October 2022



# 2023 | STRATEGIC PLAN



Working for the benefit of the Internet



## 1 Provide peering exchange infrastructure and services for Members

We will develop a clear architecture evolution plan, develop an automation plan, implement a new portal, plan for new locations through business case assessment, identify new content partners to increase content offering and grow and enhance Member services.



## 2 Advocate on matters of relevance to Members and the industry

We will build alliances with like-minded organisations to work together to represent the interests of the industry. The Association will contribute to the development of sound industry relevant policies and regulation, and demonstrate thought leadership through various publications.



## 3 Facilitate education and informed discussion

We aim to conduct industry events and social functions, sponsor or support relevant industry events and participate in the advisory boards for relevant education programs.



## 4 Run the Association in the best interests of Members

Implement and maintain best practice governance.



## STAFF



**NARELLE CLARK**

**CEO**

Although widely known as an Internet enthusiast, she also enjoys a ferocious game of netball and delicious chocolate.



**NICK PRATLEY**

**Tech Team Lead**

In his spare time, Nick indulges his passion for coding and loves hoarding domains.



**KITTY HIBBLE**

**Admin Team Lead | Company Secretary**

Kitty enjoys travelling, dabbling in property development and spending time with her young children.



**TANZIA HEWER**

**Project Officer**

One of her most favourite ways to spend time is travelling, good wine and photography.



**JEMMA GODDARD**

**Management Accountant**

Thanks to study and young kids, it is a rare that Jemma has spare time, but when she does, she loves a good Netflix binge.



**SABRINA CHANG-ROZARIO**

**Events Coordinator**

In her free time, Sabrina enjoys Pilates and yoga, dabbling in photography, reading the classics to her children and travelling.

## STAFF



**KYLE ZRINSKI**

**PHP Developer**

Kyle enjoys tinkering with hobby electronics and 3D printers, designing projects such as smart plant pots and completing logic puzzles.



**MATTHEW KOBAYASHI**

**Peering Engineer**

Matthew enjoys going to the movies, indulging in his love for motorcycles – particularly his current ride, a 2020 BMW S 1000 XR – and is a student pilot.



**AARON CHIDIAC**

**Peering Engineer**

Aaron is a self-proclaimed avid gamer, camper and prefers a traffic engineered approach to the fridge.



**CAMERON STEEL**

**Junior Developer**

Cameron enjoys reading, working on home automation and electronics projects, and bushwalking.



**SOPHIA JOO**

**Policy Officer**

When she's got the opportunity, you will most likely find Sophia at the beach enjoying the sun, surf and hot chips.



**SUZANNE THOMPSON**

**Marketing Officer**

Suzanne enjoys writing, running and swimming, and is a Ward Councillor for the City of Joondalup, where she lives.



**ANITA CHIDI-AMADI**

**Executive Assistant**

Outside of work Anita loves watching the news, cooking for her family, listening to podcasts and gaming.



**FELICTY GRIGO**

**Accounts and Administration Assistant**

Felicity is always busy with her two children and loves an escape to Bali whenever possible.



## THE YEAR THAT WAS

### ON THE ORGANISATIONAL FRONT

- Launched Convergent hybrid conference
- Ran our third IAASystems program
- Advocacy and Member engagement
- Held WA-IX 25th anniversary event
- Celebrated 10yrs of NSW-IX operation

### ON THE TECHNOLOGY FRONT

#### General

- We exceeded 1Tbps of aggregate traffic multiple times throughout the year!
- Network automation groundwork in Member Portal
- AS10084 Content network clean up, RPKI fully operational
- Implemented new 100Gbps paths
- FDB ageing timer increased to 1 day from 300 seconds, dropping large amounts of unwanted BUM traffic
- Route Server hardware refresh and redesign commenced
- Firmware upgrades completed across all sites and switches



#### NSW-IX

- Announced 400Gbps upgrade plan
- New switching in SY1, SY3 and S1



#### WA-IX

- IPv4 Renumbering
- Closed Vocus VDC-PER02 (Bentley)
- Closed DC Alliance PierDC (Canning Vale)



#### SA-IX

- New Dark Fibre paths
  - ◊ Vocus DC – YourDC Edinburgh Parks (40G)
  - ◊ Colocity – YourDC Hawthorn (40G)
- Replaced Brocade CER with Arista for AS10084 Content services
- Closed adl1: Adam DC (Adelaide)



#### QLD-IX

- Closed bne4: Over The Wire DC (Fortitude Valley)
- Deployed additional 100Gbps switch in NEXTDC B1
- NEXTDC B1 – NEXTDC B2 diverse dark fibres upgraded to 2x 100Gbps paths



#### VIC-IX

- 2x 100Gbps ring completed around all sites
- Migrated from shared carrier rack in Vocus MEL3
- 100Gbps Member ports in Vocus MEL3 with new switch



#### TAS-IX

- Contracts signed for sites and services
- Planning well underway
- Equipment acquired

## THE YEAR AHEAD

This coming year, we will continue our focus on good governance and strategic planning, and expand our Convergent hybrid conference program. We will launch new pricing for iVLLs and continue to expand our content offerings.

## TECHNICAL REPORT

Our goal is to operate an exemplary internet exchange platform, meaning that our services will stand as the most reliable, most secure and to the best operating standards possible. We pride ourselves in being accessible to all our Members, offering technical support and assistance directly from our technical team in Australia.

### OUR FUTURE LOOKS BRIGHT AND BUSY

We are currently maintaining 22 active sites for IAA, with services available in a further 4, as well as 9 points of presence for the New Zealand Internet Exchange (NZIX). We will be expanding WA-IX by moving into NextDC P2. Over in South Australia we will be exiting the Vocus DC in Franklin St, but opening in NextDC A1 when it opens. TAS-IX will launch early in 2024 with two PoPs, and we will complete the 400Gbps NSW-IX upgrade to offer a superfast core and 400Gbps ports at all NSW-IX sites. We'll also continue upgrading the route servers and retiring ancient switches from the network. Stay tuned for updates throughout the year!

#### Big ticket items are:

- Complete deployment of 400Gbps switches in Sydney
- Complete SY3 fibre clean up, 12U of SC patching with one or two ports left per RU
- Complete the removal of older devices – x460s and x670s
- Enhance network automation in portal – Enable Automatic Deployments
- Cloud VLLs – List providers and locations correctly, for better ordering workflows
- Validate replacement of MPLS and VPLS with VXLAN
- NextDC A1 Deployment – First 100Gbps site for Adelaide!
- NextDC P2 Deployment – Fibres exist, enabling 100Gbps ports
- TAS-IX bootstrap, two sites, content – thanks again FSG!



# NETWORK TUBE MAP



ASN 63830 (Peering)  
 www.ix.nz  
 T +64 9888 9221  
 E peering@ix.nz

## OUR NETWORK

As at 1st February 2023

### AKL-IX

- **AKL1** Data Centre 220  
220 Queen St AUCKLAND CBD
- **AKL2** Vocus DC  
7A Parkhead Pl ALBANY
- **AKL3** Chorus MDR  
31 Airedale St AUCKLAND CBD
- **AKL4** DataVault  
162 Grafton Rd GRAFTON
- **AKL5** Datacom  
6 Orbit Dr ROSEDALE

### WLG-IX

- **WLG1** Spark Wellington Central Exchange  
70 Featherston St PIPITEA
- **WLG2** Xtreme DC  
191 Thorndon Quay PIPITEA

### CHC-IX

- **CHC1** Christchurch Central Exchange  
109 Hereford St CHRISTCHURCH CBD
- **CHC2** Computer Concepts Ltd  
21 Durham St South SYDENHAM

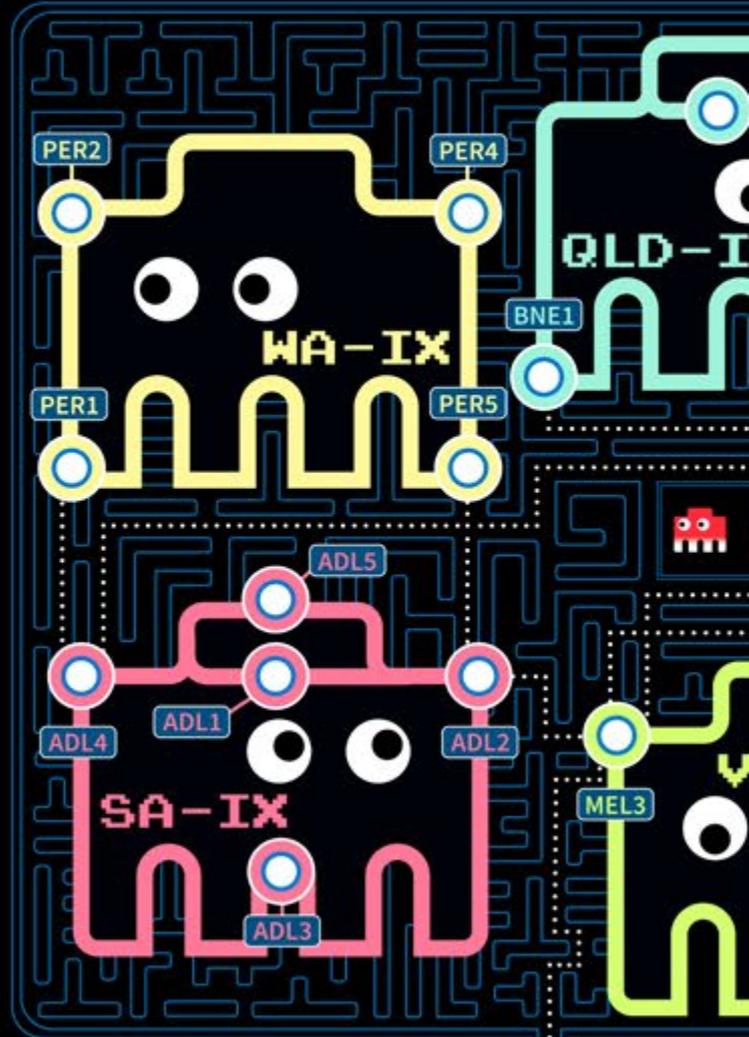
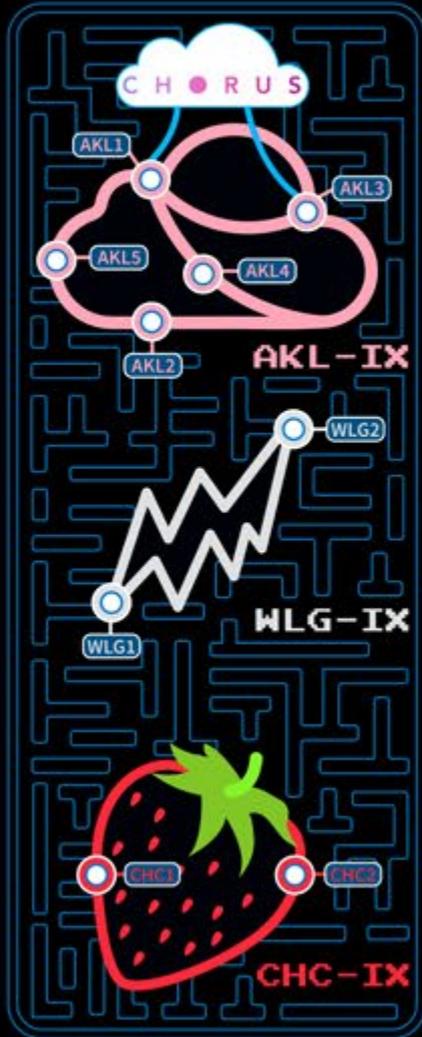
### OUR SERVICES

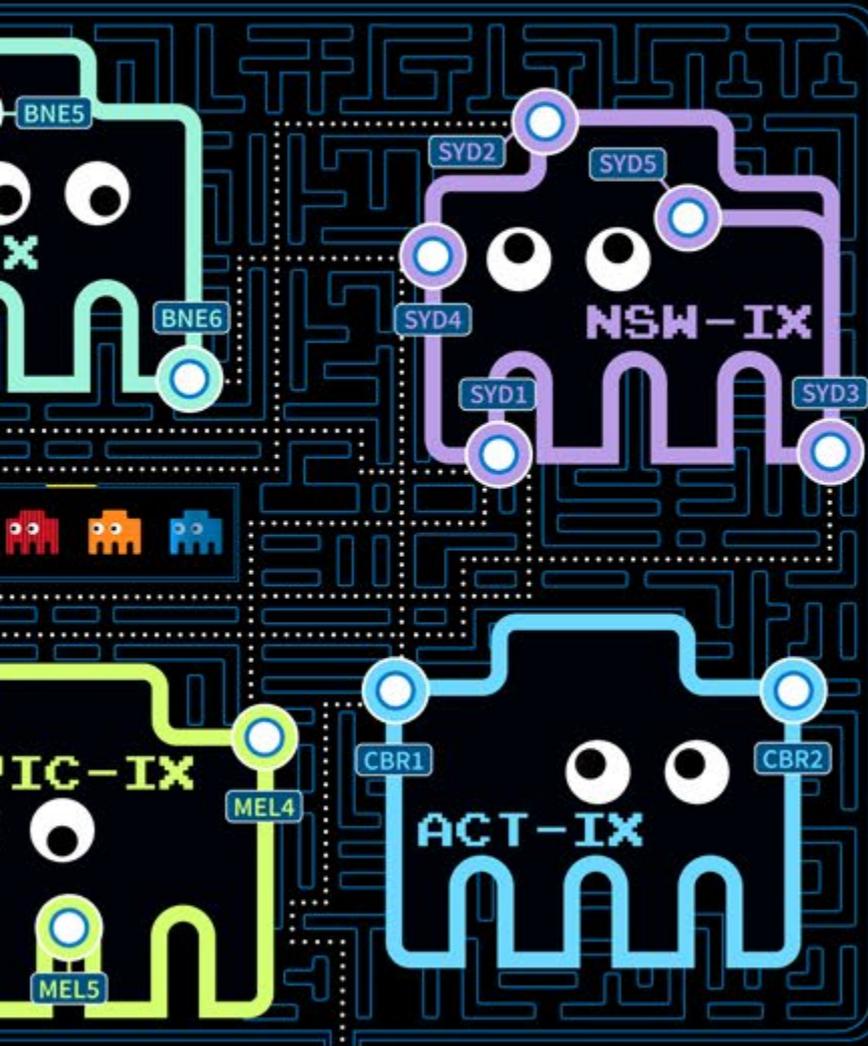
- Peering
- Chorus EdgeConnect

### 3 MONTHS FREE

For the first 10G port  
 in each IX

HIGH SCORE  
 7606





[www.internet.asn.au](http://www.internet.asn.au)

## OUR NETWORK

As at 1st February 2023



### WA-IX

- **PER1** QV1  
250 St Georges Tce PERTH
- **PER2** VDC-PER01  
1 William St PERTH
- **PER4** Equinix PE2  
37 Lemnos St SHENTON PARK
- **PER5** NextDC P1  
4 Millrose Dr MALAGA

### VIC-IX

- **MEL3** NextDC M1  
826 Lorimer St PORT MELBOURNE
- **MEL4** Equinix ME1  
600 Lorimer St PORT MELBOURNE
- **MEL5** Vocus DC3  
530 Collins St MELBOURNE

### QLD-IX

- **BNE1** NextDC B1  
20 Wharf St BRISBANE
- **BNE5** Host Networks  
1/53 Brandl St EIGHT MILE PLAINS
- **BNE6** NextDC B2  
454 St Pauls Tce FORITUDE VALLEY

### NSW-IX

- **SYD1** Equinix SY1/2  
639 Gardeners Rd MASCOT
- **SYD2** Global Switch  
400 Harris St ULTIMO
- **SYD3** Equinix SY3  
47 Bourke Rd ALEXANDRIA
- **SYD4** NextDC S1  
4 Eden Park Rd MACQUARIE PARK
- NextDC S2  
6/8 Giffnock Ave MACQUARIE PARK
- **SYD5** Vocus VDC-SYD01  
69 Doody St ALEXANDRIA
- FujitsuDC  
23-25 Waterloo Rd MACQUARIE PARK

### ACT-IX

- **CBR1** NextDC C1  
19 Battye St BRUCE
- **CBR2** TransACT  
470 Northborne Ave DICKSON

**ASN 7606** (Peering)  
**ASN 10084** (Content)

PO Box 8700  
Perth BC WA 6000

T 1300 653 132 (general)  
T 1300 793 320 (technical)

E [peering@internet.asn.au](mailto:peering@internet.asn.au)

[www.internet.asn.au](http://www.internet.asn.au)  
[portal.internet.asn.au](http://portal.internet.asn.au)

**ABN 71 817 988 968**  
**ACN 168 405 098**

### OUR SERVICES

- Peering
- Virtual Peering
- Extended Reach Peering
- Cloud Connect
- Virtual Leased Line (VLL)

### 3 MONTHS FREE

For the first port in each IX

### SA-IX

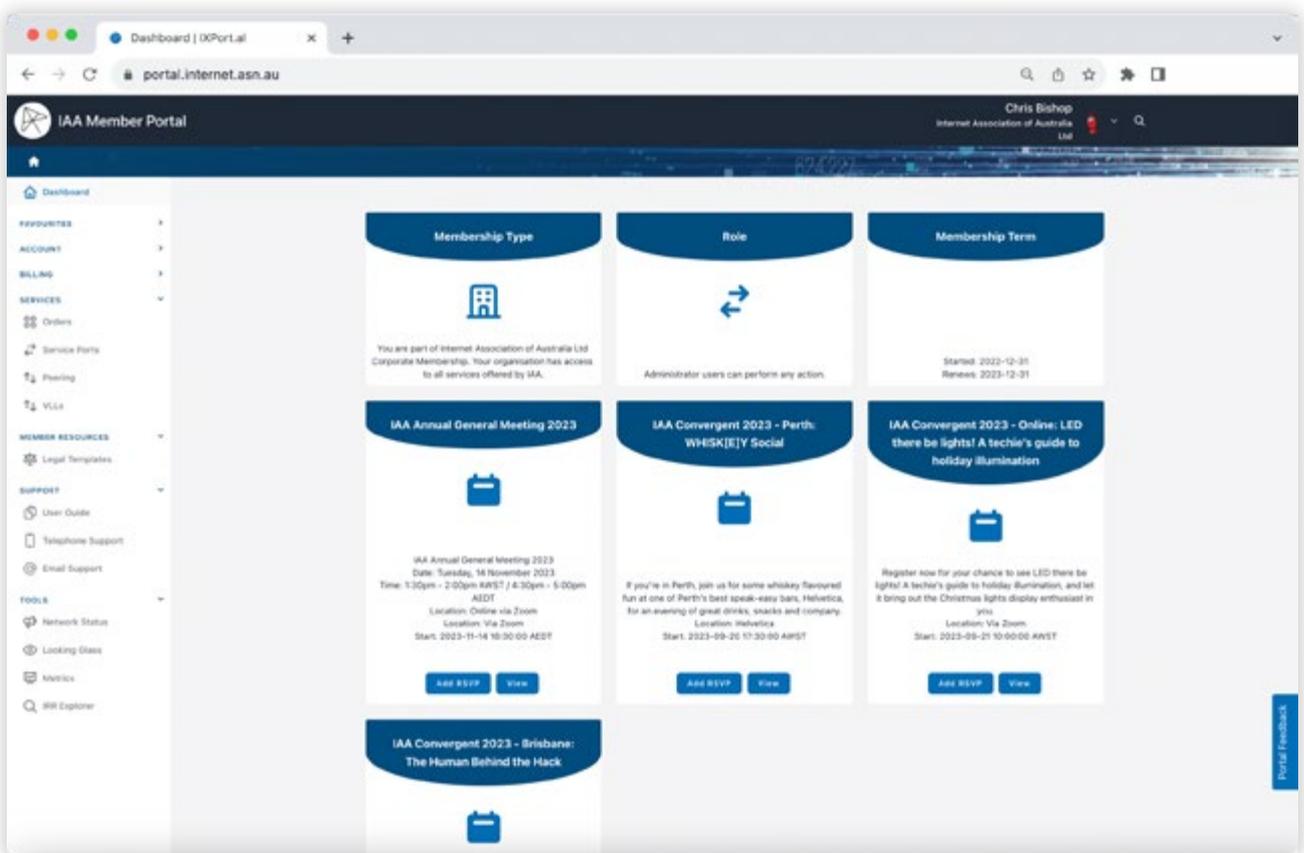
- **ADL1** AdamDC  
19 London Rd MILE END SOUTH
- **ADL2** VocusDC  
Level 1 132 Franklin St ADELAIDE
- **ADL3** YourDC Edinburgh Parks  
23-27 Woomera Ave EDINBURGH
- **ADL4** YourDC Hawthorn  
60 Belair Rd HAWTHORN
- **ADL5** Colocity DC3  
172 Morphett St ADELAIDE

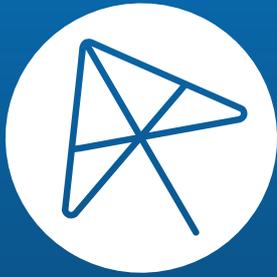
## PORTAL OVERVIEW

The new IAA Members Portal is still going strong. Since going live we have closed over 400 issues (which include new features) and deployed ~150 releases.

We have also released the groundwork for Network Automation, with the portal now generating configuration for all change requests. During 2023-2024, we are excited to remove the final human checks on the portal's processes, and allow it to touch the network.

We will also be moving away from PayWay, and starting to integrate Stripe to process credit card payments. We will be moving invoicing in house, as we are simply out growing Xero's usefulness of actually generating and sending invoices for services. There are a few issues that are just going unresolved, and removing that third-party dependency on billing and invoicing will allow us to roll out some cool new features in the long term.





## IX STATISTICS OVER THE YEAR



# 457

VALID MEMBERS  
LAST 443

# 624

TOTAL MEMBER ASNS  
LAST 596



# 652

TOTAL PORTS  
LAST 701



# 1.02

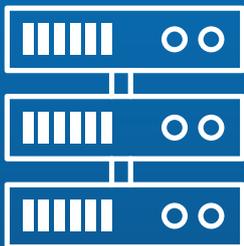
Tbps

COMBINED TRAFFIC PEAK  
LAST 937.3 Gbps



# 2

COUNTRIES



# 23

PoPs MANAGED  
LAST 26



# 320.4

Gbps

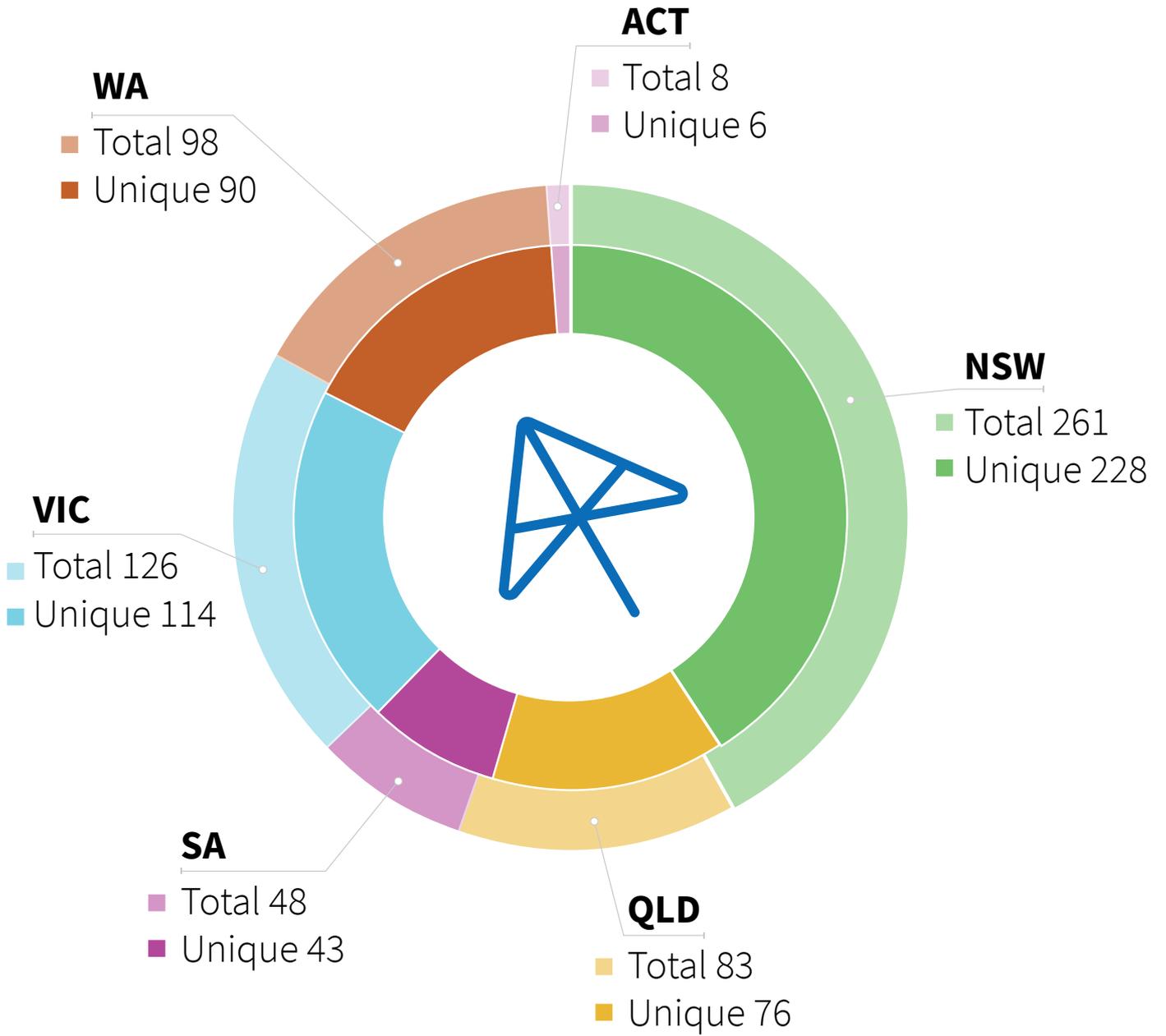
COMBINED CONTENT  
TRAFFIC PEAK  
LAST 198.7GBPS



# 6

TOTAL IXes

## UNIQUE PEERS (IXAU)

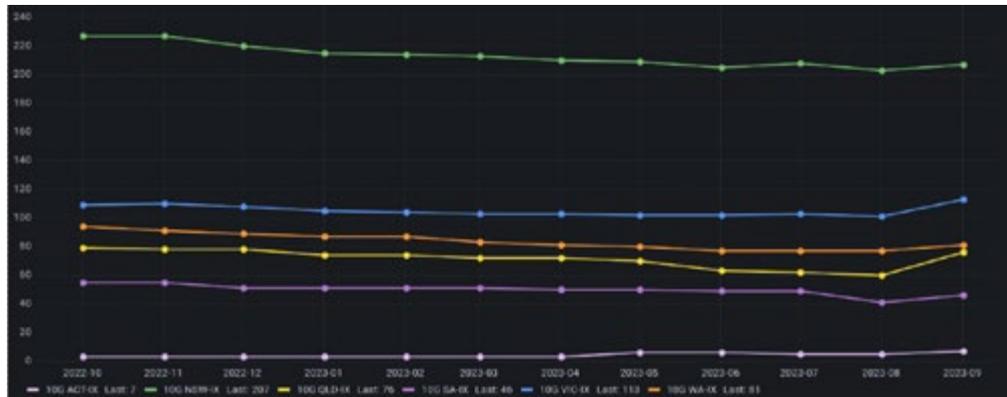


## PORTS ON THE NETWORK

### 1G PORTS



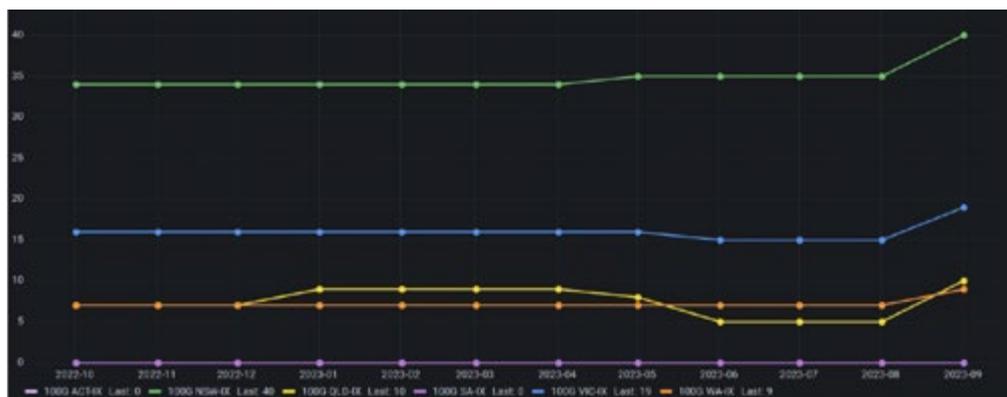
### 10G PORTS



### 40G PORTS



### 100G PORTS



## IX TRAFFIC



### NEW SOUTH WALES



### QUEENSLAND



### VICTORIA





### WESTERN AUSTRALIA



### SOUTH AUSTRALIA

**Note:** Blue lines indicate a metrics counting issue and is not reliable.



### AUSTRALIAN CAPITAL TERRITORY

**Note:** Blue lines indicate a metrics counting issue and is not reliable.



## EVENTS

It has been a busy and engaging year for the IAA Events Team, our Board, CEO and Policy Officer as all were involved in numerous events, presentations, panels and more. Through such engagements, we provide networking opportunities, representation, education and support for our Members and the industry more broadly.

We keep Members updated with our busy events calendar via our website and social media and here are some of the past year's highlights.

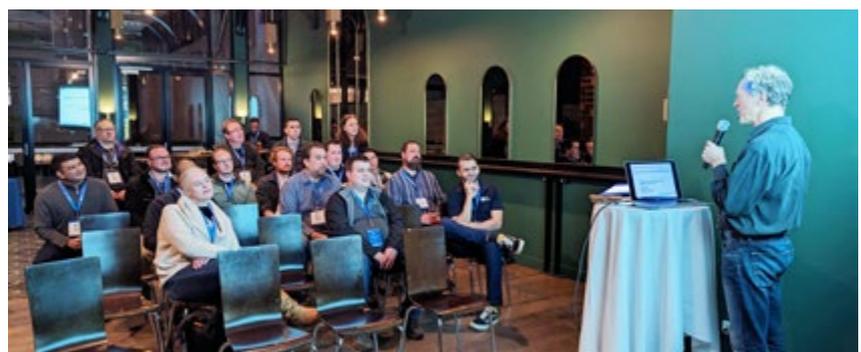
### THE IAA CONVERGENT SERIES CONTINUED

As promised, the Events Team ran a whole series of IAA Convergent events, both online and in-person. These took the form of presentations, workshops and social events held in Sydney, Melbourne, Brisbane, Perth, Adelaide and Canberra.

We'd like to make special mention of our speakers and partners:

Thanks to Graeme Bunton and Rowena Schoo for their insights into malicious domains; Professor Darryl Veitch for his fascinating presentation on NTP; Pierre Beukes for his insider's guide to Christmas lights – most illuminating - and to Dr David Lacey for putting a face to the human behind the hack outlining the scale of tragedy arising from identity theft and scams.

We also appreciate the APNIC Academy for providing Members with the opportunity to undertake free RPKI training in several cities, the fantastic venues that hosted our events across Australia, and, of course, our Members for making them such a success.



**NSW-IX TURNED 10**

This June, we marked NSW-IX's 10<sup>th</sup> year of operation. We celebrated in style with drinks and canapés at the Helm Bar & Bistro as the sun set over Darling Harbour. It was a great night, and we appreciate all of the Members who were able to join us. We look forward to many more years of peering with you.



**COMMS DAY POLICY FORUM**

IAA's Policy Officer, Sophia Joo, spoke at the inaugural Comms Day Policy Forum in mid-June, joining government, industry and other key stakeholders to discuss the future of telecommunications policy in Australia. Sophia's speech addressed the need for stronger engagement between government and industry for better quality policymaking in the telecommunications sector.

**AUSNOG 2023**

In September, we headed to the Sea World Conference Centre on the Gold Coast for AusNOG. The IAA team sponsored, attended and hosted a booth. It was a great opportunity to learn what's new in our industry and catch up with IAA Members, along with making some great new contacts to peer and partner with in the future.



## EVENTS

### NETTHING 2023/ APriIGF2023

We proudly sponsored this year’s NetThing, and our CEO participated in a panel discussion for the Asia-Pacific regional IGF2023 about ‘Global Good Practice and the Internet of Things’. It was a privilege to be a part of this hybrid three-day Brisbane event, focusing on important Internet governance issues faced across the industry, and indeed across the region.



### CYBEROZ 2023

We were a Supporting Partner of this year’s CyberOz event. Our CEO, Narelle Clark, gave a presentation on ‘Cybersecurity and IPv6 from an Australian Industry Perspective’, while IAA Board Chair, Matthew Enger, participated in a panel discussion on the ‘State of Cybersecurity, IPv6 and IoT’. It was highly successful and provided valuable insight into these critical issues.

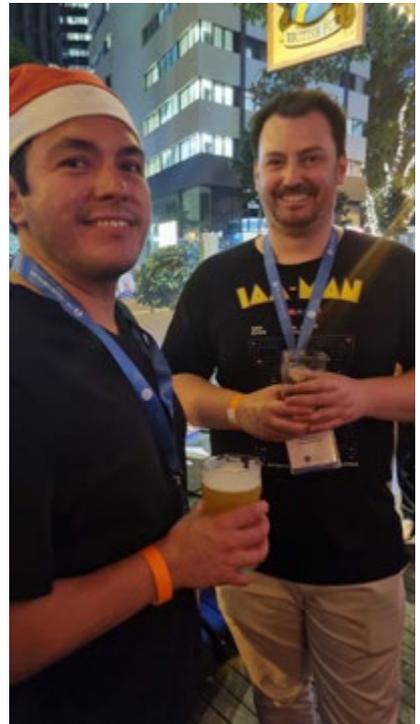
### IAA MEMBERS FORUM 2023

August saw our inaugural IAA Members Forum, an online event in which we gave Members an update on all matters IAA, from exchanges to events, and responded to questions from Members. We plan to host these once a year, in addition to the AGM, as an opportunity for Members to engage with the IAA Team, ask questions and provide feedback.



### END OF YEAR MEMBER EVENTS

Once again we celebrated a successful year, hosting a swathe of social events for our Members. As has become our tradition, the Perth and Sydney Members hopped aboard boat cruises, while Members in Brisbane, Adelaide and Melbourne enjoyed good food and beverages at some equally picturesque land-based venues.



### APRICOT 2023 (MANILA)

Did you attend APRICOT 2023 in Manila? You might have seen our CEO, Narelle Clark, there also. Narelle appeared on a panel to discuss IP address leasing policy and judged the Hackathon, as well as numerous spirited Internet policy discussions.



## EVENTS

### IAASYSTERS 2023

We created the IAA Systems program to help support women in the Internet industry. Now in its third year, the program once again comprised a one-day workshop focusing on career enhancement strategies and two days of technical training via the AusNOG conference, which was hosted at the Sea World Conference Centre on the Gold Coast.

Our program gained even more momentum this year and the high quality of applicants made it difficult to choose our latest crop of IAASystems. They all rose to the challenge magnificently, participating in the highly successful workshop, offering career



planning, presentation skills and a candid look at strategies for workplace safety. It was great to see all the participants actively engaging in all sessions, making new connections, learning and developing their skills and confidence.

The feedback from attendees has been positive, with one participant reporting back that, “the program was engaging and helpful, especially in a field that is so male-dominated”.

“ I really enjoyed absorbing the energy, knowledge & experience that all of the presenters shared. ”

“ From start to finish, this was a very enjoyable experience. Thank you. ”



We would like to take this opportunity to thank our sponsors. This year’s Gold Sponsors: Aussie Broadband, Amazon Web Services, APNIC and Netcraft Australia, along with our Silver Sponsor, Vocus. Your contributions to this program and our efforts to support women in the Internet industry make IAASystems possible.

“ Thank you for organising this program. I’ve enjoyed so much being surrounded by all these amazing people, speakers, staff and learning a lot from it. I’m really looking forward to the next two days and continue learning. ”



## SPONSORSHIP

An important part of our support for the Internet and the people who build and operate it is our sponsorship of events, programs and organisations. Once again, we were pleased to continue to invest in initiatives that add value to the Internet community.

### Sponsorships

- Gold Sponsor
- Bronze Sponsor
- In Kind Sponsor
- Panel Member / Presenter
- Notebook & Pens Sponsor
- Sponsored by IAA



#### PEERINGDB

**Gold Sponsor** ●

A public website best known for being the go-to site for interconnection data.



#### WITWA

**Bronze Sponsor** ●

A mission-driven, not-for-profit Association providing a framework for women in technology.



#### BSIDES CANBERRA

**Bronze Sponsor** ●

The biggest technical cyber security conference in Australia. Nick and Kyle also excelled in their security challenge competition!



#### APRICOT 2023

**Bronze Sponsor** ●

Asia Pacific's largest international Internet conference, on Operational Technologies.



#### CYBER SECURITY FOR GOVERNMENT SUMMIT 2022

**In Kind Sponsor and Presenter** ● ●

An in-depth look at how organisations are building their cyber-defences.



#### COMMSDAY SUMMIT

**In Kind Sponsor 2022 | 2023** ●

Australia's most respected source of daily telecom industry news and commentary.



**DIGITAL GOVT 2022 - Government Digital Transformation**  
**In Kind Sponsor ●**

Bringing together digital transformation leaders to deliver better citizen outcomes.



**STATE OF THE SOCIAL**  
**In Kind Sponsor ●**

Australia's favourite digital marketing conference provides essential education and inspiration.



**EXITO CYBER SECURITY CONFERENCE SYDNEY**  
**In Kind Sponsor ●**

Top security experts discussed strategies and best practices to build a secure and resilient enterprise.



**DIGITAL TRANSFORMATION LIVE 2023**  
**In Kind Sponsor ●**

Bringing together ICT leaders, business, enterprise and government, to engage with digital solution providers.



**CYBEROZ 2023**  
**In Kind Sponsor and Panel Member ● ●**

Fostering global collaboration and encourage innovation in the domains of Cybersecurity, IPv6 and AI.



**NETTHING - 2022**  
**In Kind Sponsor and Panel Member ● ● ●**  
**2023 Notebook & Pens Sponsor**

Facilitating discussions on governance and public policy issues pertaining to the Internet in Australia.



**APRIGF 2023**  
**Panel Member ●**

Advancing the Internet governance development in the Asia Pacific region.



**AUSNOG 2022 & 2023**  
**Sponsor ○**

An annual two-day event providing quality content and networking for Australian network operators.

## MEMBER PRODUCT PORTFOLIO



### PEERING SERVICES

IAA operates Australia's largest not-for-profit, carrier neutral peering exchange – IX Australia. When you choose to peer on our network, you are joining a community of other like-minded businesses who want to be part of a more equitable interconnection.

#### WHAT IS PEERING?

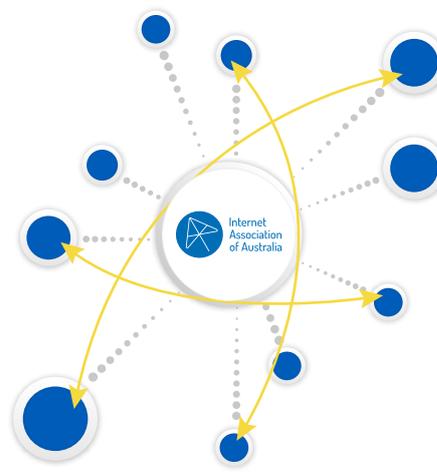
Peering is all about making connections and improving throughput without paying a third party! It is a process by which Internet networks physically connect at Internet Exchange Points (IXPs), to mutually exchange traffic.

Peering offers many benefits including latency reduction, backhaul optimisation, and improved efficiency with the added benefit of lowering your connectivity costs.

Designed to flatten the hierarchy of Internet connectivity, peering makes for a more open and equitable Internet.

#### OUR NETWORK

The Internet Exchanges IAA operates are available in more than 30 data centres nationally, with IXPs located in Adelaide, Brisbane, Canberra, Melbourne, Perth, and Sydney. We co-locate our equipment in data centres to offer port speeds of 10Gbps, 40Gbps, and 100Gbps as onramps to our network.



### VIRTUAL LEASED LINES

As a peer on our network, you have the option of establishing a dedicated high-speed, point-to-point connection across our national network with other peers, and we call it Virtual Leased Line (VLL).

This service enables you to connect to other members, content providers, or simply have your peering ports connected directly across our network infrastructure.

#### HOW DOES A VIRTUAL LEASED LINE WORK?

VLL provides the means to communicate privately using a scalable and high-speed data network between other IX peers over a single physical provisioned Ethernet Interface of 10Gbps or higher.

When you connect with a 10Gbps connection, 5Gbps is reserved for your peering traffic allowing you to build five free scalable point-to-point networks in a single state, capped at half of your port speed. Using our iVLL service, you can establish point to-point connections across Australia, leveraging our national backbone network.



## CLOUD CONNECT

Add to your connectivity options by accessing your preferred Cloud provider using your existing IX Australia port. Cloud Connectivity uses advanced MPLS technology to offer you a dedicated link to connect to your cloud provider via a trusted organisation.

This service also provides the flexibility to scale your network speeds depending on your business needs at a higher speed and a stable latency across the country.

Cloud Connectivity has the potential to be a cost-effective solution that allows users to focus on their core business rather than being impeded by costly information technology constraints.

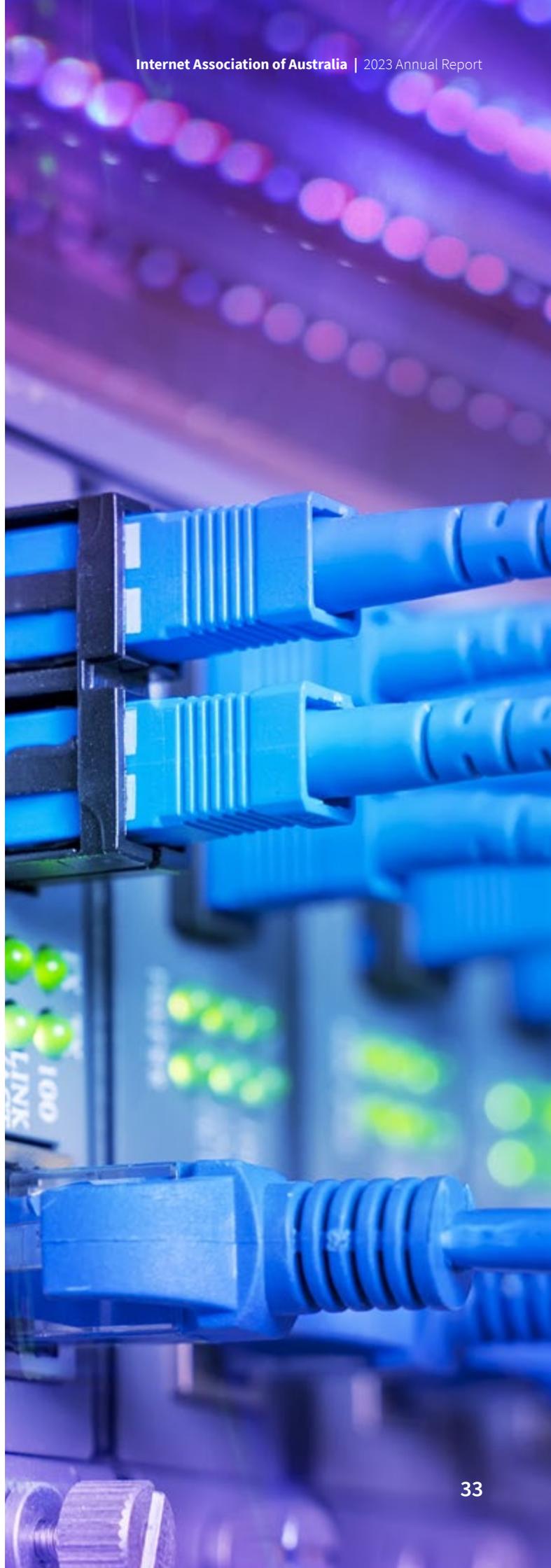
### HOW DOES CLOUD CONNECTIVITY WORK?

Cloud computing is a dense cluster of computers working together and sharing resources despite appearing to be one computing resource. It works in an on-demand style delivering the different types of resources you need. Resources include: compute, databases, and storage; giving users access to a plethora of IT solutions to better suit your business needs.

### SERVICE DETAILS

This service is available at speeds starting from 50Mbps with additional speed options ranging from 100Mbps to 500Mbps in 100Mbps increments on a month-to-month basis.

To access this service, members must have an active IX Australia peering port of 10Gbps or higher.



## FINANCIAL SUMMARY AND OUTLOOK

We are pleased to report that we have maintained our full year budget for the fourth consecutive year, as approved by the Board, and continued to execute our investment strategy. We have expanded our staff from 10.6 FTE to 11.8 FTE, and our trading income has grown in the 40Gbps and 100Gbps port segments. However, we have seen a short-term effect on our overall income due to the consolidation of 10G to 100G ports.

We have reduced our overall expenses compared to FY22, mainly due to the lower equipment maintenance cost, as we incurred a one-off expense for switching in the previous financial year for our highly anticipated 400G port product, due to supply chain delays. However, our expenses in wages, travel, and events have increased as we have been actively hosting, sponsoring, and supporting events across the Internet industry. In FY23, we signed a new lease agreement for an office space in Osborne Park to accommodate our growing Perth team. We have also acquired more IPv4

addresses to meet forecast demand and replace addresses we didn't actually have the right to use.

Our auditor again gave us an excellent unqualified rating in his third year auditing our accounts. Our investment portfolio has performed well in FY23, and we have a strong financial position with adequate cash reserves for long-term upgrade planning and network evolution.

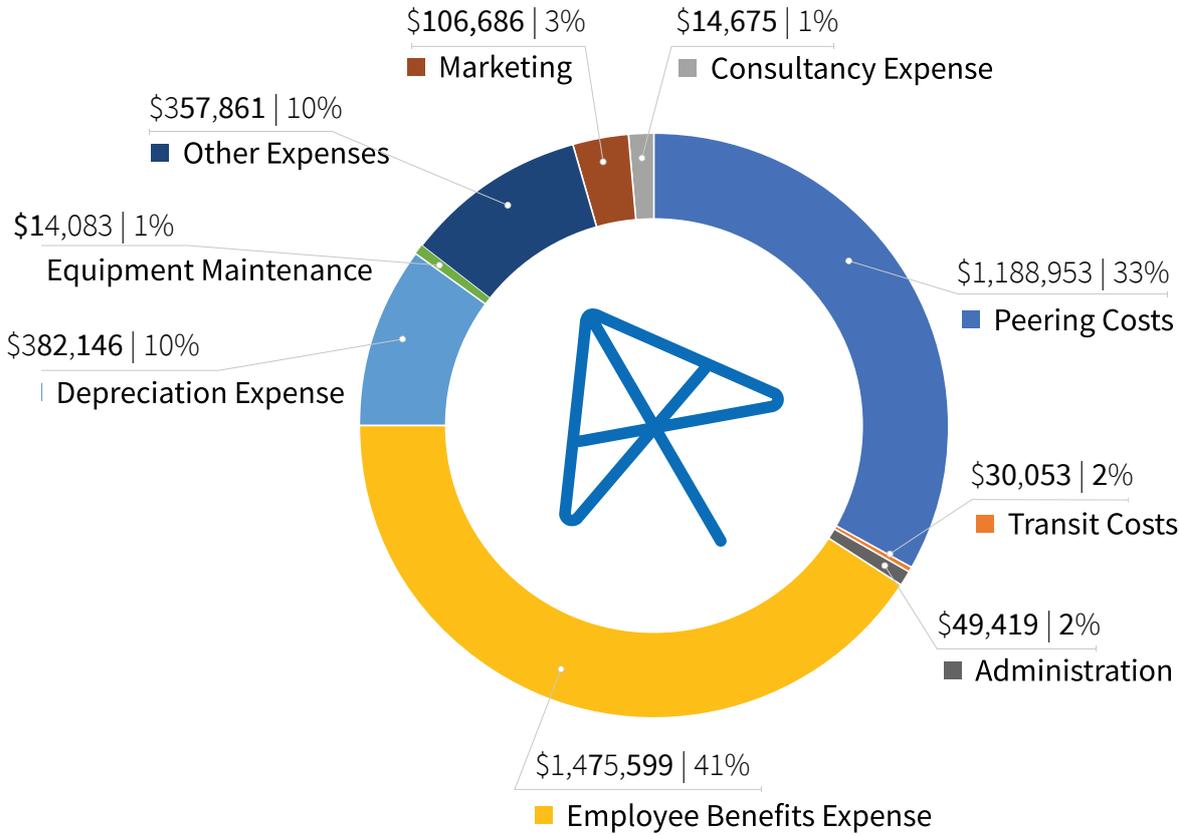
The Board also approved the TAS-IX project and we are working on lowering the iVLL pricing across the network. As SA-IX is celebrating its 10th anniversary, we recently completed upgrades, creating more capacity between the sites and adding a new content switch. We have decided to offer a 50% discount on SA-IX ports for the next 12 months for all new and existing Members on SA-IX.

FINANCIAL SUMMARY	FY22-23	FY21-22
<i>Total Income from member services, grants and other</i>	\$3,991,526	\$4,075,064
<i>Surplus before Income Tax Expenses</i>	\$442,223	\$476,693

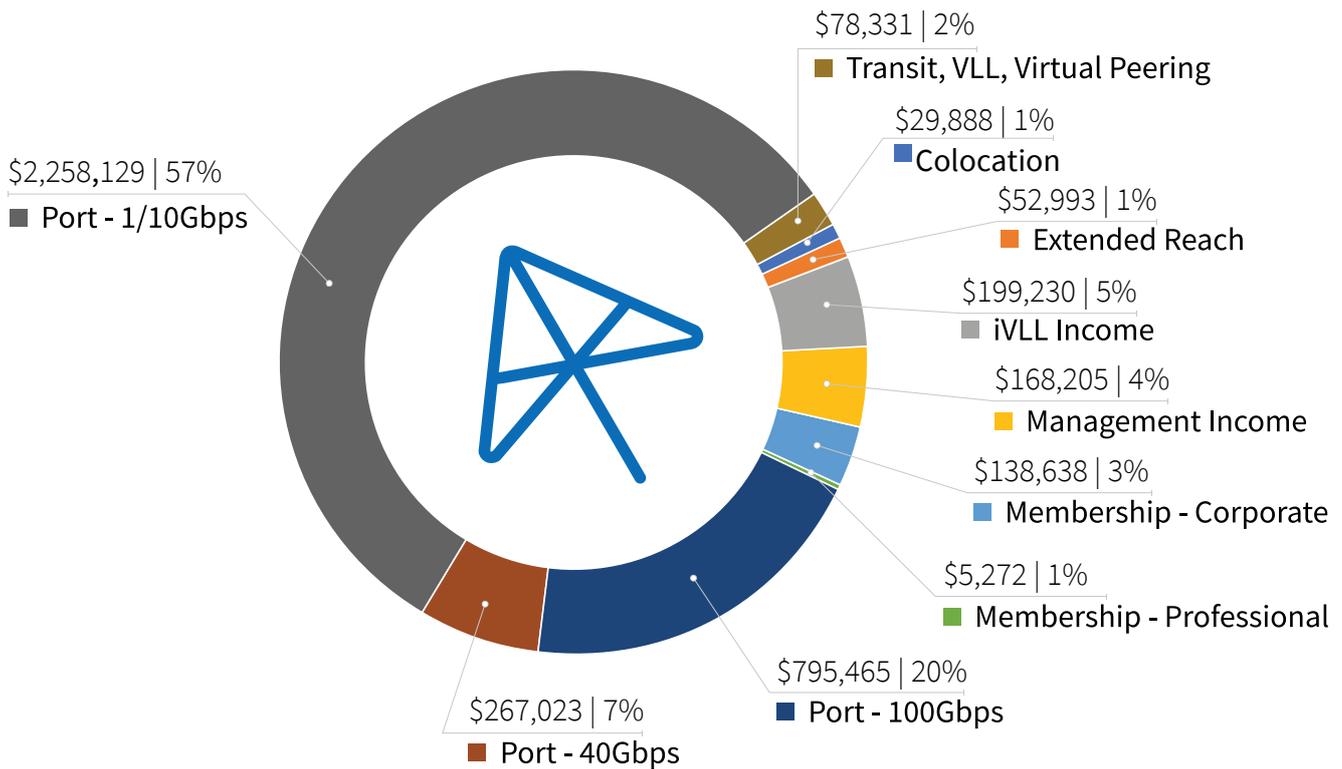
FINANCIAL POSITION	FY22-23	FY21-22
<i>Assets</i>	\$6,446,395	\$5,239,866
<i>Liabilities</i>	\$2,134,443	\$1,415,531
<i>Net Assets</i>	\$4,311,952	\$3,824,335

	FY22-23	FY21-22
<i>Reserves</i>	\$45,063	\$(22,398)
<i>Retained Surplus</i>	\$4,266,889	\$3,846,733
<b>Total Equity</b>	<b>\$4,311,952</b>	<b>\$3,824,335</b>

### IAA EXPENSES FY23



### IAA INCOME FY23



## IAA'S PUBLIC POLICY IMPACT

### ON THE ORGANISATIONAL FRONT

Advocacy continued to be a core part of IAA's work this year and we have been proudly representing the interest of our members, and the public good of the Internet in response to the ever-changing regulatory environment.

We were proud to see the effects of our growing advocacy efforts as this year, IAA had much more improved engagement with government and regulatory bodies, being specifically invited to be part of working groups to help inform policy decisions that would affect our members, as well as representing industry in key policy events.

Our key areas of focus this past year have been:

- Continue responding to consultations on changes to legislation and policies;
- Being at the table where discussions on policy areas are taking place;
- Representing IAA and members at industry events;

### SUBMISSIONS

We have continued to advocate on behalf of members and the Internet in our submissions on consultations pertinent to the Internet industry.

Below are some of the key areas of consultation that IAA responded to:

#### **NBN Co Special Access Undertaking**

Since withdrawing its SAU in July 2022, there have been multiple rounds of consultations and discussions surrounding a varied SAU. Our responses and efforts have brought attention to the unique position that smaller RSPs face, one of which is the disproportionate effects of NNI pricing, resulting in a targeted consultation being conducted to address NNI pricing, resulting in a targeted consultation being conducted to address NNI pricing.

While the SAU has still yet to be finalised, industry is heading towards an acceptable SAU that will bring benefits to RSPs and end-users, hopefully soon!

#### **Privacy Legislation**

We saw the release of the Privacy Act Review Report as well as the passing of the Privacy Legislation Amendment (Enforcement and Other Measures) Act in FY22-23. IAA raised our concerns about the lack of focus on consolidating and simplifying legislation to ensure that businesses are actually aware of their privacy obligations, can practically practice

data minimisation, and have access to resources to assist with compliance.

As the review is still ongoing, we expect further consultation, particularly surrounding discussions about the proposed removal of the small business exemption, and changes to include greater amount of 'technical data' in the definition of 'personal information'.

### PUBLIC POLICY ADVISORY PANEL

The Public Policy Advisory Panel has continued to prove to be a great source of insight and knowledge. Providing their time and experience, IAA has again relied on the Panel members to gain greater insight into various matters, including the likely establishment of a CSP register.

The increased quality of our advocacy work is, in part, thanks to our new Public Policy Advisory Panel. We sincerely thank the continued time and efforts of the Public Policy Advisory Panel and sincerely look forward to continuing working with them in the future.

### INDUSTRY EVENTS

IAA is getting greater recognition as a representative for small and medium-sized ISPs in the industry and has received increased invitations and requests to participate in events related to policy and security.

In July 2022, our CEO spoke and chaired a session at the Cyber Security for Government Summit, presenting on measures taken by Internet Industry to secure the Internet.

In October 2022, IAA's Policy Officer hosted a panel at NetThing, Australia's Internet governance forum to discuss the liability of ISPs in relation to online defamation, which also allowed a discussion of the responsibility of ISPs more generally in the context of online content, an age-old debate still live today.

IAA CEO also spoke at another Cyber Security Conference in December 2022, discussing trust in the Internet infrastructure.

Our Policy Officer also represented IAA and members at the inaugural Comms Day Policy Forum in May 2023, where she called for principles-based policies, emphasising the need for greater transparency and communications, genuine collaboration and practicality.

## PLANS FOR FUTURE

With various regulatory issues still ongoing, such as the Privacy Act review, the implementation of the remainder of the Security of Critical Infrastructure Rules, which is likely to result in changes to the security provisions in the Telecommunications Act, the ongoing TCP Code review and the likely introduction of a new Financial Hardship Standard, we aim to continue being active in our engagement with government and other stakeholders to ensure that any changes to the regulatory space will be measured, effective, and won't harm the Internet, or be overly onerous on ISPs.

Our hopes for the year ahead also include improved engagement with our members, and holding a member event with government and regulatory representatives to

## SUBMISSIONS MADE

- Proposed NBN Co SAU Variation | [ACCC](#)
- Treasury Laws Amendment (Competition and Consumer Reforms No. 1) Bill 2022 | [Treasury](#)
- Discussion Paper – NBN Co Revised SAU Variation Proposal | [ACCC](#)
- Stage 2 Review of the Model Defamation Provisions Part A | [Department of Justice and Attorney-General](#)
- Draft Consolidated Industry Codes of Practice for the Online Industry | [Online Safety Organisation](#)
- 5-year Productivity Inquiry = Australia's data and digital dividend – Interim Report | [Productivity Inquiry](#)
- Variation to the Telecommunications Numbering Plan | [ACMA](#)
- Privacy Legislation Amendment (Enforcement and Other Measures) Bill 2022 | [Senate Legal and Constitutional Affairs Committee](#)
- SBAS Access Draft Determination | [ACCC](#)
- C647 NBN Co Access Transfer Code | [Communications Alliance](#)
- Telecommunications Universal Obligation (Standard Telephone Service – Requirements and Circumstances) Determination 2022 | [Department of Infrastructure, Transport, Regional Development, Communications and the Arts](#)
- Telecommunications Legislation Amendment Bill 2022 | [Senate Standing Committees on Environment and Communication](#)
- Record Keeping Rules – NBN Service Performance | [ACCC](#)
- Digital Platforms: Government Consultation on ACCC's Regulatory Reform Recommendations – Consultation Paper | [Treasury](#)
- NBN Co November 2022 SAU Variation | [ACCC](#)
- Copyright Enforcement Review | [Attorney General's Department](#)
- Internet Carriage Services Online Safety Code | [Steering Committee of Industry Associations](#)
- ACMA Compliance Priorities 2023-24 | [ACMA](#)
- Privacy Act Review Report | [Attorney General's Department](#)
- 2023-30 Australian Cyber Security Strategy Discussion Paper | [Department of Home Affairs](#)
- SBAS Final Access Determination Exposure Draft | [ACCC](#)
- ACCC Draft Decision – NBN Co SAU Variation | [ACCC](#)
- TCP Code Review Discussion Paper
- Further Targeted Response – NBN Co SAU Variation | [ACCC](#)



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