

APNIC EC Meeting Minutes

Face-to-Face meeting, Montevideo, Uruguay

Wednesday, 5 December 2018, 09:05 – 12:00 (UTC -3)

Thursday, 6 December 2018, 09:05 – 12:08 (UTC -3)

Friday, 7 December 2018, 09:10 – 13:11 (UTC -3)

Meeting start: 09:05 (UTC -3), Wednesday, 5 December 2018

Present

Benyamin Naibaho
Gaurab Raj Upadhaya, Chair
Izumi Okutani (remote)
Jessica Shen
Kam Sze Yeung
Kenny Huang, Treasurer
Paul Wilson, Director General
Rajesh Chharia, Secretary (remote)

Connie Chan, Senior Executive Assistant (minutes)
Craig Ng, General Counsel
Richard Brown, Business Director
Sanjaya, Deputy Director General

Apologies

Nil

Agenda

1. Opening of meeting and declaration of quorum
2. Agenda bashing
3. Declaration of interests
4. Review of minutes of last meeting and record of circular resolutions passed since the last meeting
5. Matters arising from the last meeting
6. Chair update
7. WH&S update
8. Secretariat report
9. NRO Number Council appointment
10. IANA Numbering Services Review Committee appointment
11. APNIC Election Chair appointment
12. ASO review update
13. Update on joint board meeting with LACNIC
14. Remote participation and online voting for the election of SIG chair
15. Electronic voting systems
16. Policy endorsement
17. APNIC Foundation update
18. Service Partner model
19. Financial report
20. Review of advice on electronic voting systems
21. Approval of 2019 budget and activity plan
22. Risk Register update
23. EC response to survey results
24. Strategic planning process

- 25. Any other business (AOB)
 - 26. Next EC meeting
-

Minutes

1. Opening of meeting and declaration of quorum

The Chair of the EC welcomed all attendees to the meeting. The Chair declared the meeting open at 09:05 (UTC -3) on Wednesday, 5 December 2018, and noted that a quorum was present.

2. Agenda bashing

The Chair called for comments on the agenda. There were no new agenda items raised.

It was agreed to move the EC response to Survey results after the 2019 activity plan discussion.

3. Declaration of interests

The Chair asked the EC members to review the Register of Interests (attached), and to declare any potential conflicts of interests, and for any such declaration to be recorded in the minutes.

Paul Wilson declared that he was previously a board member of Afiliis Australia, but he has since resigned. This has already been updated in the Register of Interests.

Gaurab Raj Upadhaya declared that he was a standing member of the Program Committee of APRICOT, SANOG, and Global Peering Forum.

Rajesh Chharia declared that he was a member of the Internet Governance Forum (IGF) Multistakeholder Advisory Group (MAG).

All other EC members present confirmed that their entries in the Register of Interests are complete and correct.

Action item 2018-06: The Secretariat to update the Register of Interests.

4. Review of minutes of last meeting and record of circular resolutions passed since the last meeting

The following circular resolutions (that require the agreement of all EC members who are entitled to vote on the resolution) were passed by the EC during the period between the last EC meeting and this meeting and are recorded in these minutes for completeness.

Resolution 2018-13: The EC resolved to adopt the minutes of EC meeting of 10 September 2018.

5. Matters arising from the last meeting

The following matters from the previous meetings are pending:

Action item 2017-23: The Secretariat to investigate and make recommendations concerning alternative electronic voting systems. [pending]

6. Chair update

The Chair presented the EC travel expense report. He noted that the expenses were on track, and the EC have participated in more regional meetings in 2018.

The Chair reminded the EC to complete their travel plans for the coming year, and encouraged the EC to prioritise their participation in events located in the Asia Pacific region.

The Chair briefed the EC on the arrangement of the joint meeting with the LACNIC Board. There will be an external facilitator to guide a process that assists the group in discussing various topics. The Chair encouraged the EC to raise any topic that they would like to discuss with LACNIC.

7. WH&S update

Kam Sze Yeung who serves as the EC liaison on WH&S spoke to the Health and Safety update. The EC were also reminded to review the WH&S management system on the EC twiki.

The EC were asked if they were satisfied with the WH&S processes and procedures at APNIC for the management of WH&S risks. As there were no objection from the EC, the Chair and the DG will be signing a declaration form stating that compliance to APNIC's WH&S responsibilities and obligations have been met.

8. Secretariat report

The DG spoke to the highlights of the Secretariat Report. (attached).

The EC discussed several items in the Secretariat Report including RPKI, whois accuracy and privacy to address GDPR and other related issues.

The DG then spoke to the HR report.

9. NRO Number Council appointment

The EC discussed and considered the candidates for the NRO Number Council.

Resolution 2018-14: The EC resolved to appoint Mr Simon Sohel Baroi to the NRO Number Council/ASO Address Council for a one-year term from 1 January 2019 to 31 December 2019.

Motion proposed by Gaurab Raj Upadhaya; seconded by Paul Wilson. Passed unanimously.

Action item 2018-07: The DG to contact Simon Sohel Baroi to confirm his willingness to accept the appointment.

10. IANA Numbering Services Review Committee

The EC discussed and considered the candidates for the IANA Numbering Services Review Committee.

Resolution 2018-15: The EC resolved to appoint Mr Zulfadly Syam to the IANA Numbering Services Review Committee for a two-year term from 1 January 2019 to 31 December 2020.

Motion proposed by Gaurab Raj Upadhaya; seconded by Paul Wilson. Passed unanimously.

Action item 2018-08: The DG to contact Zulfadly Syam to confirm his willingness to accept the appointment.

11. APNIC Election Chair appointment

The EC discussed and considered the candidates for the APNIC Election Chair.

12. ASO review update

The DG gave an update on the status of the ASO review.

The EC supported the convening of a global working group to work with others in the other regions to form a uniform opinion between the RIRs about its relationship with ICANN, to take the ASO review process forward. They also agreed to share the results of the survey of the APNIC community with the NRO EC.

Meeting adjourned at 12:00 (UTC -3), Wednesday, 5 December 2018.

Meeting resumed at 9:05 (UTC -3), Thursday, 6 December 2018.

13. Update on joint board meeting with LACNIC

The Chair briefed Rajesh Chharia and Izumi Okutani on the joint board meeting with LACNIC Board held yesterday. The group identified three high level topics for discussion. He encouraged the EC to suggest additional topics for discussion.

14. Remote participation and online voting for the election of SIG chair

Sanjaya spoke to the presentation on the technical working group and managing remote participation at APNIC meetings.

The EC considered the proposed options and asked the technical working group to refine the solutions, develop election criteria and present an updated proposal at the next EC meeting.

15. Electronic voting systems

Craig Ng presented the advice about full online voting for APNIC Members at the APNIC Members Meeting (AMM).

The Chair suggested the EC fully digest the advice and defer the discussion until tomorrow morning (See agenda item 20).

16. Policy endorsement

The EC reviewed the policy proposal that received consensus at APNIC 46 (attached).

Resolution 2018-16: The EC resolved to endorse the adoption of policy proposal: prop-125 validation of "abuse-mailbox" and other IRT emails.

Motion proposed by Paul Wilson; seconded by Kam Sze Yeung. Passed unanimously.

17. APNIC Foundation update

The DG spoke to the Foundation update presentation (attached).

The EC discussed the selection criteria for prospective board members.

Duncan Macintosh is planning to attend one EC meeting each year to provide his report personally to the EC.

18. Service Partner model

Sanjaya spoke to the Service Partner update presentation.

The EC considered and agreed to the proposed Service Partners Communications Strategy.

19. Financial report

Patrick Armitage from Credit Suisse joined the meeting via remote participation. He spoke to the investment update presentation (attached).

Following the review on APNIC's risk appetite and tolerance, the APNIC portfolio remains invested as a yield-oriented (balanced) portfolio. It is noted that the long-term performance of the APNIC portfolio has been very good.

[Patrick Armitage left the meeting at 11:30 (UTC -3)]

Richard Brown spoke to the financial report presentation (attached).

The EC considered the monthly financial report and the investment fund management report for October 2018 (attached). The EC noted that APNIC is solvent and able to meet all current debts.

The October financial report highlights an operating surplus of AUD 1.7M to date, with revenue tracking at 1% over the budget and expenses tracking at 2% under the budget forecast.

At the end of October 2018, APNIC had a total of 7,067 Members serving 54 economies.

Meeting adjourned at 12:08 (UTC -3), Thursday, 6 December 2018.

Meeting resumed at 9:10 (UTC -3), Friday, 7 December 2018.

20. Review of advice on electronic voting systems

The EC considered and supported the introduction of a full electronic voting system for the exercise of APNIC Members' voting rights at the AMM.

The EC emphasised that the online voting system must be reliable and not susceptible to any interference or abuse and is trusted by both the APNIC Members and the broader Internet community. The EC instructed the Secretariat to prepare an implementation plan for the EC to consider.

Action item 2018-10: The Secretariat to prepare an implementation plan for full electronic voting systems.

21. Approval of 2019 budget and activity plan

The DG gave a high-level overview of the proposed Activity Plan for 2019 (attached).

There was a brief discussion on the length of the APNIC conference in Chiang Mai. The EC suggested continuing with the three-day format.

The EC also discussed the number of full-time equivalents (FTEs) for the increased staffing levels needed to cope with increased workload.

Richard Brown spoke to the 2019 Budget presentation (attached).

The EC discussed the proposed budget at length, noting the gap between the projected revenue and expenses for 2019 and the need for careful management over the coming years to achieve a financially sustainable position.

Resolution 2018-17: The EC resolved to approve and adopt the 2019 Budget (as attached) that provides authority to the Director General for a total operational expenditure of AUD 22,928,778 and a total capital expenditure of AUD 874,411 for 2019.

Motion proposed by Kenny Huang; seconded by Rajesh Chharia. Passed unanimously.

Resolution 2018-18: The EC resolved to provide the following general guidance to the Director General in relation to the 2019 budget and in relation to expenses generally:

- **Maintain an overall employee head count at APNIC at 82.**
- **Conduct an analysis to assess the financial viability of reclaiming unused historical addresses, and the financial impact if legacy address holders were to become APNIC Members.**
- **Provide the EC with higher visibility of cash flows arising from operational revenue and expenses.**
- **In future budgeting, ensure that expenses growth is commensurate with revenue growth.**
- **Aim to achieve the agreed 18-month target of net equity to expenses ratio in consecutive budget cycles.**

Motion proposed by Gaurab Raj Upadhaya; seconded by Rajesh Chharia. Passed unanimously.

22. Risk Register update

The EC reviewed the current APNIC Risk Register. There were no proposed changes to the current Risk Register.

To ensure that all the risks for APNIC are effectively monitored, addressed and updated on a regular basis, the EC considered and agreed to a new approach to risk management from 2019 using risk categories. The Secretariat will run a survey to gather data on risk items before the risk management workshop at the June EC meeting.

Action item 2018-11: The Secretariat to prepare a risk register survey to gather inputs from the EC.

23. EC response to survey results

The EC discussed the draft EC response to the 2018 APNIC Survey. The Secretariat will amend and shorten the document as requested.

Action item 2018-12: The Secretariat to amend the survey response as requested.

[Izumi Okutani left the meeting at 12:40 (UTC -3)]

24. Strategic planning process

The EC discussed the strategic planning process.

The EC Strategic Planning retreat is tentatively scheduled for the first week of June 2019.

25. Any other business

The Chair called for any other business.

There was a suggestion for a joint meeting with the ICANN Board in Kobe, Japan. The DG is currently exploring possible dates with the ICANN board, towards the end of the ICANN meeting.

26. Next EC meeting

The next EC meeting is scheduled for Monday, 25 February 2019 in Daejeon, South Korea.

Meeting in-camera from 13:11 (UTC -3), Friday, 7 December 2018

Meeting closed at 13:35 (UTC -3), Friday, 7 December 2018.

Attachments:

- A. Register of interest**
- B. [Confidential information redacted]**
- C. Secretariat report and presentation**
- D. [Confidential information redacted]**
- E. [Confidential information redacted]**
- F. [Confidential information redacted]**
- G. Policy endorsement**
- H. APNIC Foundation update presentation**
- I. [Confidential information redacted]**
- J. Investment update presentation**
- K. October 2018 investment report**
- L. October 2018 financial report presentation and report**
- M. 2019 activity plan and budget submission**

Agenda Item 3

Declaration of Interests

APNIC EC Register of Interests

Declaration of interests of EC members

This register records the interests of EC members, which may conflict with the EC members' duties to APNIC. This register is accurate as at 16 November 2018.

Gaurab Raj Upadhaya declared that he currently holds the following positions:

- Employee of Amazon Web Services (AWS/Amazon) as the Principal for Infrastructure/IP Strategy Development
- Director of the Nepal Research and Education Network (NREN)
- Chairman of Nepal Internet Exchange (NPIX)

Izumi Okutani declared that she currently holds the following positions:

- Employee of Institute for Global Environmental Strategies (IGES) as Programme Manager of Business Taskforce
- Member of the Internationalization of JANOG (JANOG i18n)
- Member of the Secretariat of Internet Governance Conference Japan (IGCJ)
- Member of the Multistakeholder Steering Group of [APrIGF](#)

Jessica Shen declared that she currently holds the following positions:

- Employee of CNNIC as Director of IP Operation, under the Ministry of the Cyberspace Administration of China

Kam Sze Yeung declared that he currently holds the following positions:

- Member of the HKNOG Program Committee
- Employee of Akamai Technologies, Inc
- Member of the Working Group of Peering Asia, organizing Peering Asia 2.0

Kenny Huang declared that he currently holds the following positions:

- CEO of TWNIC
- Board of Director, ISOC Taiwan Chapter
- Member of the Advisory Council of [DotAsia](#) Organization

Rajesh Chharia declared that he currently holds the following positions:

- President of the Internet Service Providers Association of India (ISPAI)
- Director of the National Internet Exchange of India (NIXI)
- CEO of CJ Online Pvt. Ltd
- Director of Chandra Industrial Company Private Limited
- Founding member of INNOG

Benyamin Parulian Naibaho declared that he currently holds the following positions:

- President Director of PT. Cyber Network Indonesia (ISP, NAP, Data Center and VPN Provider)
- President Director of PT. Platinum Network Indonesia (ISP)
- Chief of Data Center and Indonesia Internet Exchange (IIX) - APJII (Indonesia ISP Association)
- MAG (Multistakeholder Advisory Group) of ID-IGF (Indonesia Internet Government Forum)
- Treasury of APJATEL (Indonesia Telecommunication Network Provider Association)

Paul Wilson declared no conflict of interests.

Agenda Item 8

Secretariat report

23 November 2018

APNIC Secretariat Report

to 31 October 2018

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Introduction

This report is provided to the APNIC Executive Council (EC) for the quarterly face-to-face meeting in Nouméa, New Caledonia, on 10 September 2018. **It provides a summary of activities from Q1 to Q3 2018, and ‘to date’ in Q4, up to 31 October 2018.**

0.1 Executive Summary

This summary provides a list of all significant highlights since the closing date of the previous report, 5 September 2018.

Highlights:

- APNIC Service metrics continue to show high satisfaction and SLA results (2.1).
- Average page load time for MyAPNIC has improved 12% since the start of the project to improve MyAPNIC performance and usability. The MyAPNIC RPKI service also now support AS0 ROA creation (2.2).
- The APNIC Blog reached a milestone in July 2018 by passing 1 million views since its creation in August 2014. Average monthly views in 2018 to date are 40,457 (2.3).
- NEPALREN, PCTA and MYNOG are APNIC’s Service Partners. During October, APNIC received its first Member referred through this initiative (2.7).
- Prop-125: Validation of “abuse-mailbox” and other IRT emails reached consensus at the AMM. The subsequent four-week comment period on the mailing list closed without any objections on 16 October 2018. The Policy SIG Chairs have now formally requested the APNIC EC to endorse the proposal (6.1).
- APNIC has supported the establishment of several IXPs in the region through training, technical assistance, sponsorship and equipment support, including PNG-IXP, Fiji IXP, BKNIX, MISPA-IXP, IXP-DB, and APIX. (6.3).
- In May, APNIC conducted a workshop in Tonga to support CERT development in the Pacific, with attendance from seven Pacific economies. A second CERT event was held in APNIC 46, with 13 sponsored participants joining the Network Security workshop and TIRST TC (6.6).
- APNIC provided 62 fellowship to APNIC 46 from 17 economies in the region, including 24 females. The majority of Fellows (51) were from Pacific Island economies (7.2).
- As part of the project to increase participation in the APNIC PDP, APNIC published the first of 6 blogposts looking back at places that have made a significant impact at the end of October, with the remaining posts scheduled for November (7.7)
- Two new APNIC Foundation Board members have been appointed, bringing the total to five, with two positions vacant: Mr. Danish Lakhani from Pakistan and Mr. Michael Malone from Australia (8.1).
- APNIC serves as Chair of the NRO EC in 2018, and of Coordination Groups ECG, RSCG, and CCG. (9.1)
- APNIC and other RIRs are due to complete community consultations by November 2018, regarding the ASO Review (9.1).
- From 1 January to 31 October, APNIC had 182 engagements. These included face-to-face trainings at 27% (50 so far), followed by security related engagements at 14% (26 so far) of which half were dedicated to the development of CERTs in the Pacific (9.3).

Notable project activities and developments:

- All aut-num objects assigned by APNIC are currently being protected with the APNIC-HM maintainer in the whois database. This work will be completed by the end this year (1.3).
- Automation of the IPv4 transfer listing and pre-approval renewal processes have now been developed and deployed (1.5).
- APNIC's quality management system underwent a successful surveillance audit at the end of July, which found that it complied with the AS ISO9001:2016 requirements (2.5).
- Single Sign-On (SSO) has been deployed, allowing 'APNIC login' credential to access the APNIC Academy, Internet Directory, and soon (later in 2018) MyAPNIC. (2.6)
- As announced during APNIC 46, the APNIC Survey 2018 received 1,241 valid responses, the largest of any survey so far (2.8).
- All ER processes and reporting tools have been imported into Salesforce (2.9).
- The APNIC Academy has been upgraded and now includes many new features including new courses, virtual labs and third-party resources, launched in August (4.1)
- ISIF Asia awarded USD 210,00 to 10 projects (8 grants and 2 awards) across 4 categories in the 2018 round of funding. ISIF Asia received 236 nominations for the 4 categories from 28 economies in the region, including 122 for the new category, Gender Empowerment and Innovation (8.2).
- APNIC has coordinated/led NRO coordination group projects including ITHI, Whois accuracy, Resource transfer improvements, website and presentation redesign, RDAP review, RPKI standardisation, and statistical report developments (9.6).
- During 2018, APNIC Secretariat adopted a 'Product Management' approach to development of systems and services (12.4).

Serving Members

1 Registration Services

1.1 IPv4, IPv6 and ASN delegation and registration services

Resources pool summary

The following table shows the status of all APNIC Internet number resource pools in the current reporting period.

	Total held (start)	From IANA	Transfers in	Transfers out	Total held (end)	Total allocated	Total free
IPv4 (/24s)	3,473,539	4	1,049	2,564	3,472,028	3,442,912 (99.16%)	29,116 (0.84%)
IPv6 (/48s millions)	69,926	0	n/a	n/a	69,926	3,961 (5.60%)	66,010 (94.40%)
ASNs	17,044	0	0	0	17,044	15,250 (89.47%)	1,794 (10.53%)

Table 1: Internet number resource summary

IPv4, IPv6 and ASN delegations

The following table shows the number of delegations for each resource type and the graphs below the table show the distribution of delegations by sub-region.

Resources	Q1 2018	Q2 2018	Q3 2018	Q4 2018
IPv4 (103 /8)	497	473	597	217
IPv4 (recycled space)	10	10	37	15
IPv6	324	337	423	142
ASNs	296	437	445	79

Table 2: Internet number resource delegations

IPv4 delegations

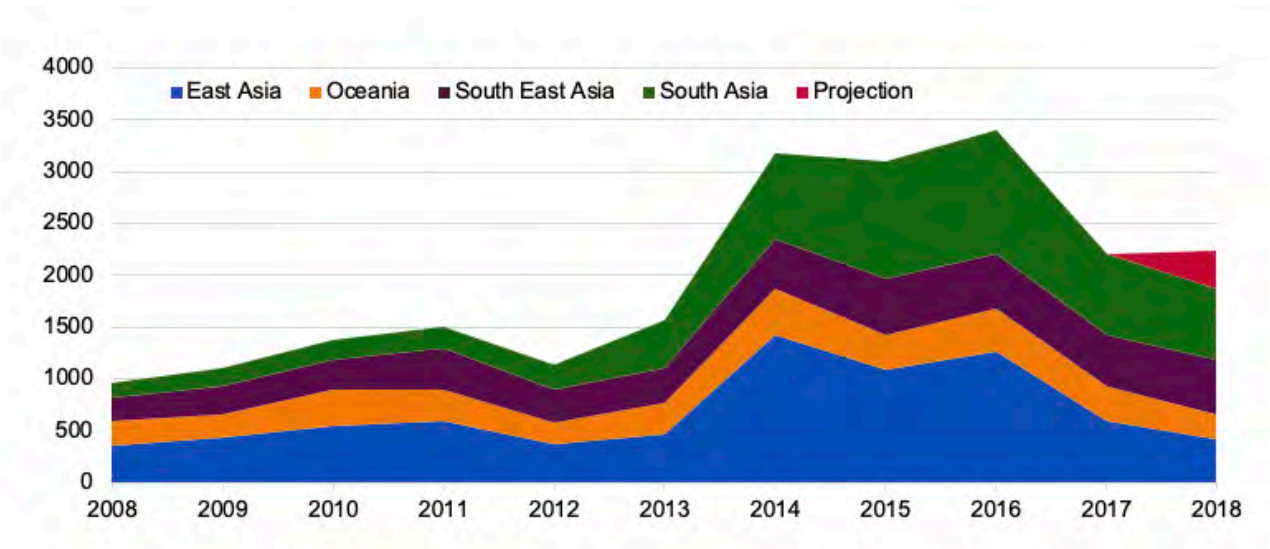


Figure 1: IPv4 delegations

IPv6 delegations

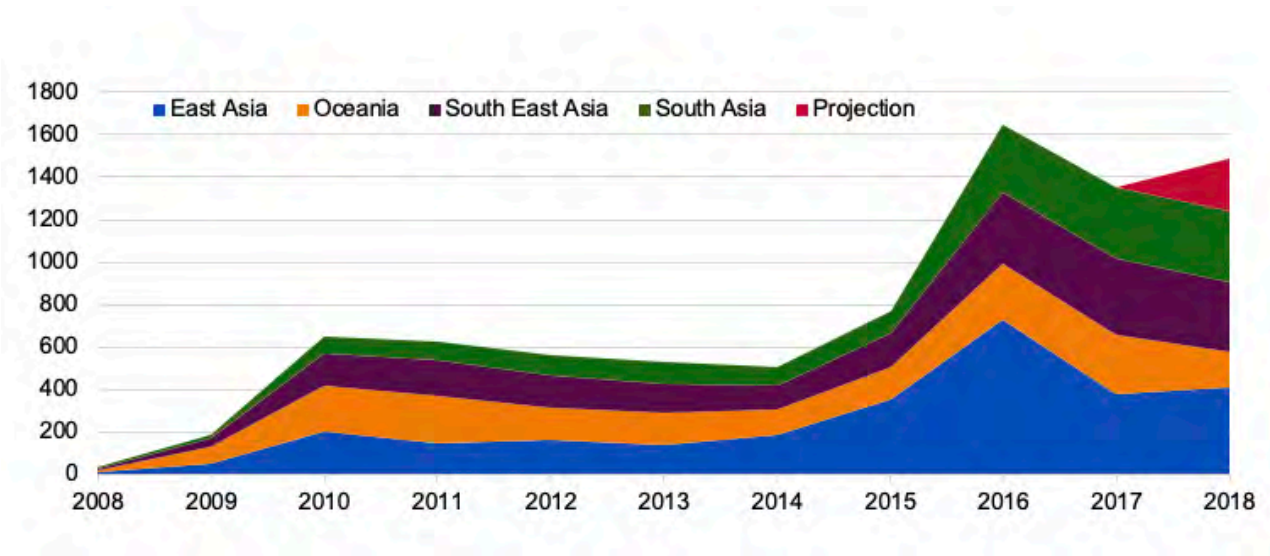


Figure 2: IPv6 delegations

ASN delegations

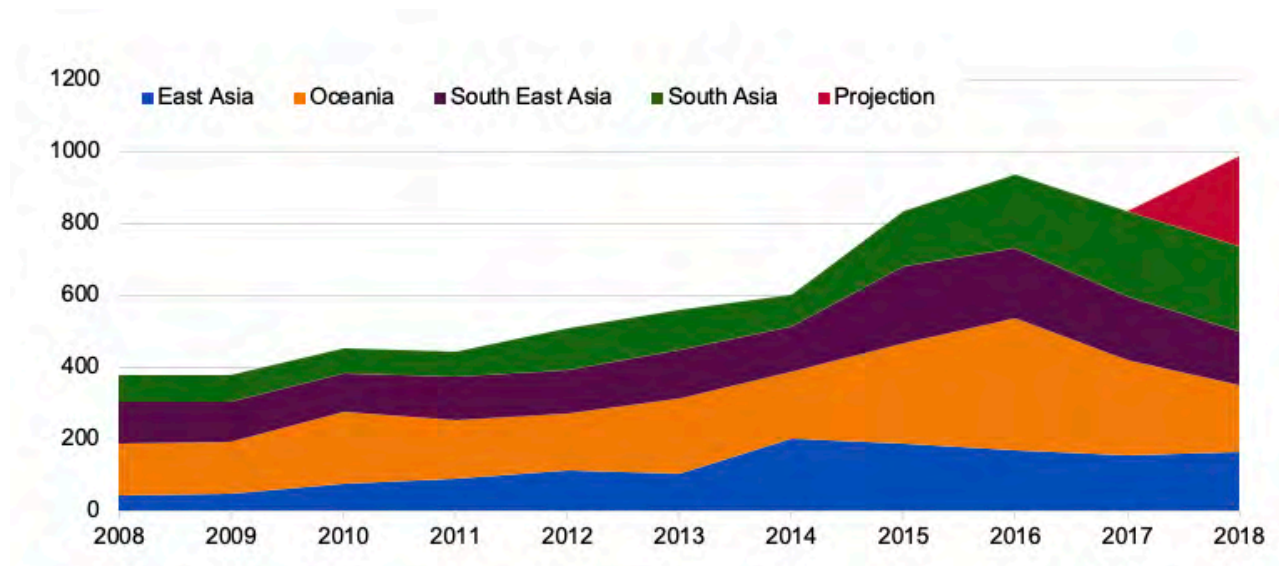


Figure 3: ASN delegations

Member resource type holdings

The proportion of Members holding specific resource types is as follows.

Resource type	Q1 2018	Q2 2018	Q3 2018	Q4 2018
IPv4 (103/8)	72.04%	73.20%	74.14%	74.56%
IPv4 (recycled space)	24.17%	23.40%	22.96%	22.87%
IPv6	57.81%	59.34%	60.47%	60.94%
ASNs	74.94%	75.37%	75.86%	75.93%

Table 3: Member resource type holdings

Status of last /8 (103/8)

The following table shows the number of delegations and the remaining space available in the last /8 (103/8).

Resources	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Delegations from 103/8 (/24s)	1,475	1,356	1,779	668
Remaining 103/8	31.05%	28.96%	25.86%	24.82%

Table 4: Status of the last /8

Status of IPv4 recycled pool

Resources	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Delegations from recycled space (/24s)	45	60	143	60
Remaining recycled pool (/24s)	12	48	129	110

Table 5: Status of IPv4 recycled pool

Waiting list for IPv4 recycled space

Unmet requests for recycled IPv4 addresses are currently kept on a 'waiting list'. Each week, terminated address space is returned to the recycled pool (after one year in quarantine) and requests on the waiting list are fulfilled in order.

To date, there are 623 entries on the waiting list, for a total of 2,444 x /24 IPv4 blocks (approx 9.5 /16s in total).

IPv4 transfers and returns

APNIC resource transfers result from mergers/acquisitions or market transactions. Market transfers may happen within the APNIC region, or to and from other RIRs (ARIN or RIPE NCC only).

Transfer type	Q1 2018		Q2 2018		Q3 2018		Q4 2018	
	#	/24	#	/24	#	/24	#	/24
M & A Total	19	1,711	50	1,098	34	11,986	11	348
Market								
• Intra-RIR	54	1,774	54	2,516	23	4,041	18	2,190
• Inter-RIR	24	2,471	28	25,077	11	3,781	10	197
Market Total	78	4,245	82	27,593	34	7,822	28	2,387

Table 6: IPv4 transfers

RPKI

Usage of RPKI services has increased during this reporting period, as follows:

RPKI usage	Start of period	End of period
Members with RPKI certificates	13.9%	14.4%
Members with ROAs	8.3%	9.0%
IPv4 under ROAs	5.0%	5.0%
IPv6 under ROAs	1.3%	5.85%

Table 7: RPKI service usage

1.2 Registry operation and maintenance

- Switched to a cheaper GeoDNS provider for whois.apnic.net, which also supports more features and performs well globally.
- Encryption was strengthened with the addition of bcrypt to the whois server as a more up-to-date password hash algorithm. The deployment does not deprecate support for CRYPT-PW or MD5-PW at this time.
- Changes to the RDAP history server were made to significantly increase the current-state query performance.
- Reengineering of the registry to a pool service with event sourcing project is completed and deployed into production.
- Performed DNSSEC signer software upgrade for the two servers and performed RDNS KSK rollover for 2018.
- Deployed an additional five DNS anycast nodes for ns2.apnic.net for a total of 10 nodes. This is to prepare decommissioning of the unicast DNS servers for the APNIC Reverse DNS zones.
- Taken over management of 126.in-addr.arpa from Softbank and completed DNSSEC signing.

Projects

1.3 Whois accuracy support

This project will help Members maintain accurate contacts with new contact update tools in MyAPNIC, and annual reminders for contact reviews in MyAPNIC.

Status:

- The project specification is completed and this project is currently in development.
- Internal testing started in September, with user testing and demonstrations at APNIC 46.
- Deployment for this service is planned in Q4, subject to testing and acceptance.
- All aut-num objects assigned by APNIC are currently being protected with the APNIC-HM maintainer in the whois database, to prevent deletion by the Member. This work will be completed by the end this year.

1.4 RPKI ‘anysign’ service

This service will use RPKI certificates to generate signed statements about resources, for cryptographic verification by other parties. Potential applications include Letters of Authority for routing of address space, authorization of IRR transactions, automated provision requests to ISPs, or signing transfer documents.

Status:

- APNIC submitted a request for an Object Identifier during IETF 103 in Bangkok.
- Proof of concept code is completed. Additional problem validation and use case analysis will be done in the new year.

1.5 Resource transfer process automation

This project removes manual steps from the resource transfer process, to improve efficiency and user experience. Specifically, the project will automate the IPv4 transfer listing and pre-approval service, outgoing inter-RIR transfer fee invoicing, and whois updates for resources transferred.

Status:

- Automation of the IPv4 transfer listing and pre-approval renewal processes have now been developed and deployed.

2 Customer Service

2.1 Member Services/Helpdesk/Billing

SLA for service requests

The APNIC Services Area aims for a maximum two-working day turnaround to respond to external requests such as new Member applications, Member resource requests, IPv4 transfers, and membership and helpdesk support. The following chart shows the percentage of compliance with this SLA in 2018.

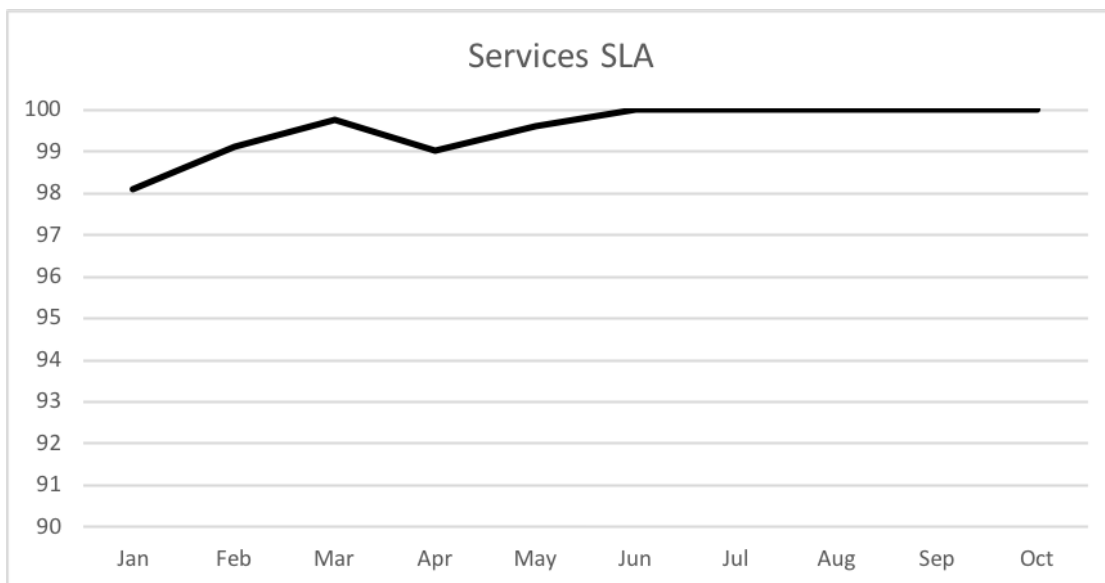


Figure 4: SLA compliance for requests

Services satisfaction ratings

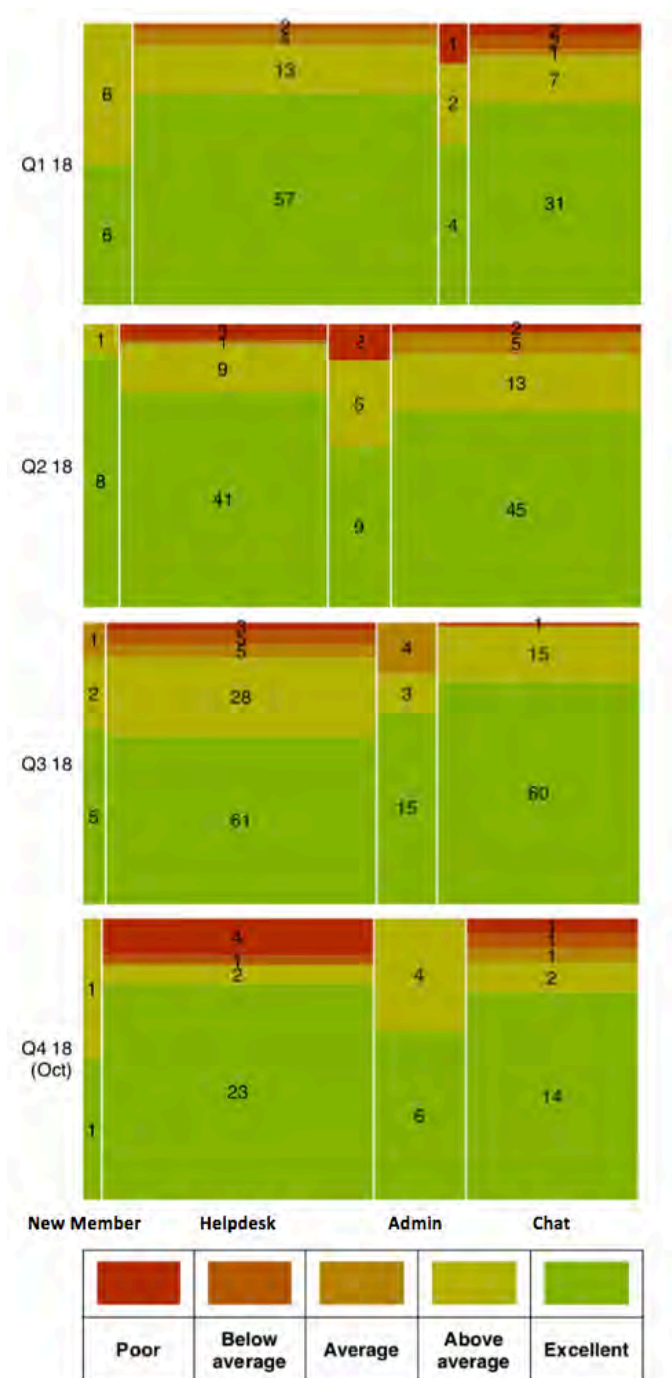


Figure 5: Satisfaction ratings

Services Area staff actively follow up on negative feedback received, to resolve outstanding issues and improve systems where possible.

Membership transactions

Transaction	Q1 2018	Q2 2018	Q3 2018	Q4 2018
New Members	199	212	212	71
Closed Members	39	59	50	40
Reactivated Members	4	3	1	3
Total Members	6,735	6,868	7,029	7,069

Table 8: Membership transactions

Figure 6: Membership growth

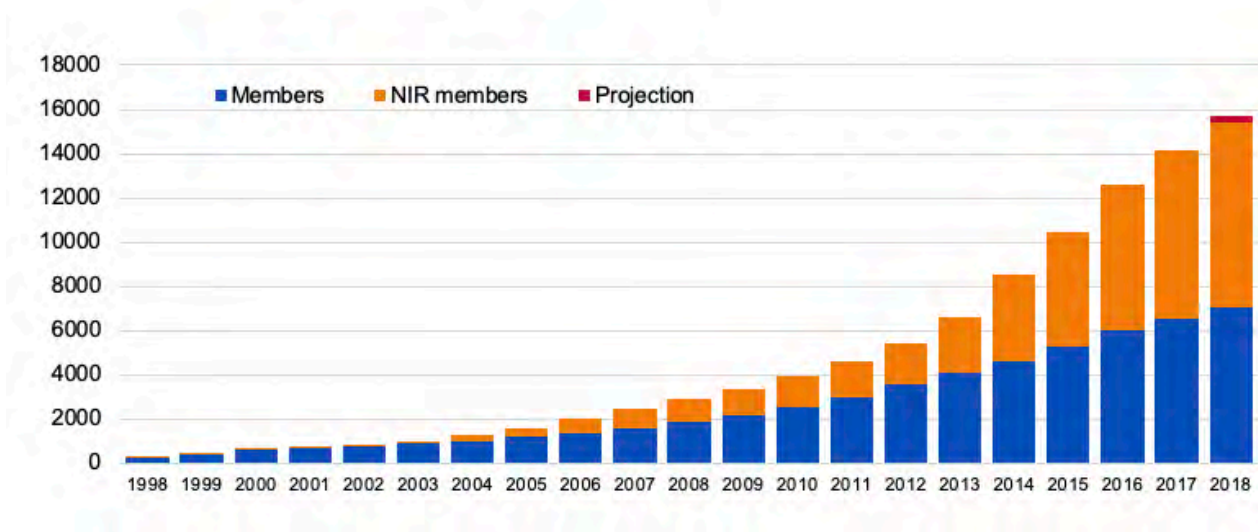


Figure 6: Membership growth

Membership industry type

APNIC Members are now classified according to industry type. We are working to extend this to members of NIRs.

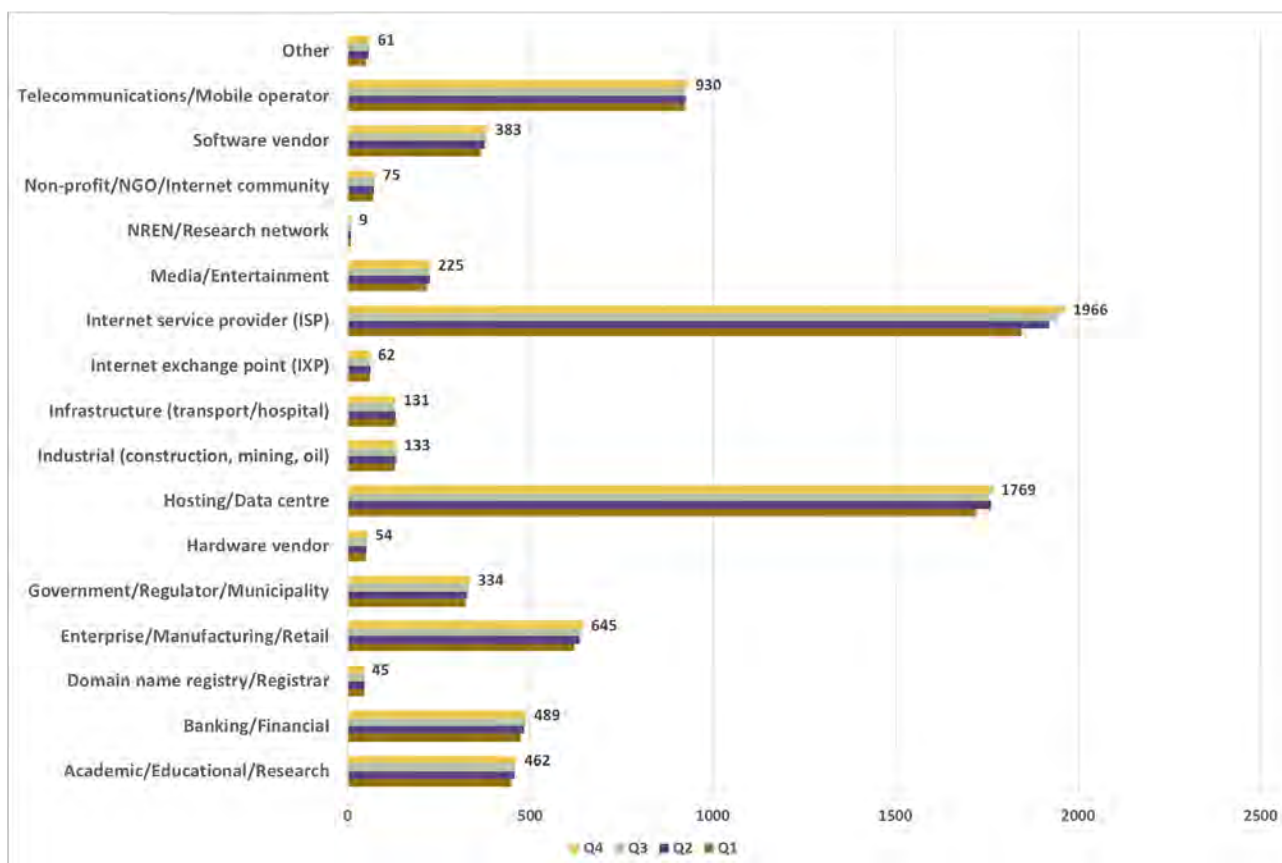


Figure 7: Member industry types

Fraud attempts

Instances of fraudulent applications and requests are summarized as follows.

Types of fraud	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Identity theft	0	0	0	0
Fabricated documents	1	1	0	4
Fabricated needs	1	0	0	1
Total fraud attempts	2	1	0	5

Table 9: Fraud attempts

2.2 MyAPNIC development and maintenance

MyAPNIC development in 2018 continues to focus on improving performance and usability.

- The MyAPNIC Product Team has reviewed a number of proposed changes and improvements to MyAPNIC's resource management. These include MyAPNIC interface changes to improve performance, an ASN management feature, listing service automation, and whois and account contact updates.
- In Q2, APNIC dedicated significant resources to an analysis of performance metrics and began making a series of changes designed to improve response and page load times.

- These include fine-tuning of the application, consolidation of libraries, reduction of assets sizes and streamlining the loading of data-heavy pages; all pending release at the time of writing.
- Average page load time has improved by 12% since the start of this project.
- The [MyAPNIC RPKI service now supports AS0 ROA creation](#). This conforms to section 4 of RFC 6483 (Disavowal of Routing Origination).

2.3 APNIC Blog

	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Views	128,939	108,817	124,715	42,099
Posts	97	85	90	34

Table 10: APNIC Blog activity level

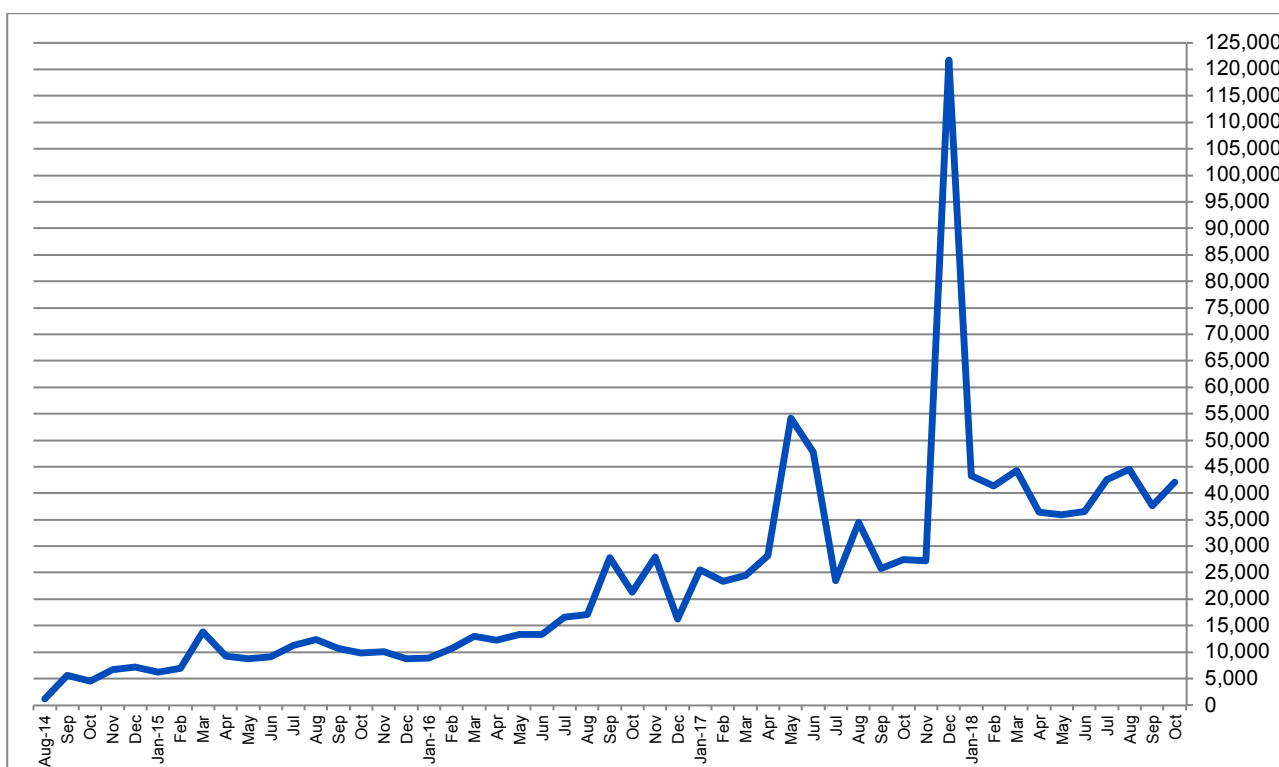


Figure 8: Monthly APNIC Blog views

APNIC Blog readership has averaged 40,457 views per month in 2018 to date, a 5% increase on 2017's monthly average of 38,643. The Blog reached a [milestone](#) in July 2018 by passing 1 million views since its creation in August 2014.

Popular posts to date have included:

- Arash Molavi Kakhki's Guest Post on QUIC and TCP performance measurement.
- Vasileios Kotronis' Guest Post on a new BGP anomaly detection system, ARTEMIS.
- A Guest Post from Jan R  th explaining research findings on the usage of QUIC.

-
- A profile piece on Malaysian security expert, Raja Azrina Raja Othman.
 - Geoff Huston's look at the QUIC 'spin bit' discussion at IETF 101.
 - Paul Wilson's article on IPv4 exhaustion.
 - A Guest Post from Tom Perrine about his gaming organization's IPv6 migration.
 - LinkedIn's Russ White discussing whether we really need a new BGP in a Guest Post.
 - Wouter de Vries' Guest Post on his research on 8.8.8.8 performance.

There have been 129 Guest Posts so far in 2018, representing 50% of total opinion posts (2017: 43%).

A Blog reader survey was conducted in February and March 2018 on future topics and reader habits. Eighty-seven readers completed the survey, with 62% responding that they read the blog at least once a week. The most popular topics for future posts were network security, case studies (IPv6 deployment, IXP or CERT creation), operational best practice, and IP addressing.

2.4 New membership outreach

APNIC provided information on membership at 25 regional events so far in 2018, including CommunicAsia (now part of ConneCTechAsia), Lao ICT Expo, APRICOT 2018, BankTech Asia Kuala Lumpur, APNIC 46, various NOGs, and the 2018 Philippine Cable Television Association (PCTA) Convention.

Information to raise awareness of the referral application process (to those Members who have previously made address sub-allocations) was developed and sent to contacts in Singapore and Malaysia, with follow-up meetings held with Members at MyNOG and SGNOC.

The total number of new Members that have joined APNIC in 2018 is 694 (see 2.1).

2.5 Quality management

APNIC's quality management system had a successful surveillance audit at the end of July. The external auditor found that the system complied with ISO9001:2016 requirements.

Projects

2.6 Improving online experience

This project aims to integrate APNIC's online services to provide a uniform experience for users of APNIC's services.

Status:

- Single Sign-on (SSO) has been deployed, allowing 'APNIC login' credential to access the APNIC Academy, Internet Directory, and then (later in 2018) MyAPNIC.

2.7 Service Partners

The new 'Service Partner' model is under trial, as a means to improve outreach to new APNIC Members according to local needs.

Status:

- On 27 March 2018, NEPALREN in Kathmandu became the first Service Partner during this trial period.
- The APNIC EC approved two additional Services Partners at their meeting in APNIC 46. These are PCTA and MYNOG (Malaysia NOG). Once agreements are signed, there will be three Service Partners, including NEPALREN.
- During October, APNIC received its first Member referred through this initiative; the first payment for this referral was processed in October.

2.8 2018 APNIC Survey

The APNIC Survey is run every two years and the 2018 APNIC Survey is the tenth iteration. For the second time, the survey was conducted in 2018 by Survey Matters, a research agency specializing in research for member-based organizations.

Status:

- The Focus Groups were selected to consider locations previously visited, size of membership, and key relationships. These were held in 15 economies, with a combination of face-to-face and online meetings during January and February 2018 in:
 - Japan, including JPNIC
 - China, including CNNIC
 - Taiwan, including TWNIC
 - Australia
 - New Zealand
 - Pacific (Fiji and New Caledonia)
 - Malaysia
 - Philippines
 - Indonesia, including APJII
 - Timor-Leste
 - India, including IRINN
 - Pakistan
 - Bangladesh
 - Nepal
 - Afghanistan
- Findings from these Focus Group sessions were incorporated into the 2018 APNIC Survey form, which was reviewed by the EC prior to launch. The survey was open from 5 June to 2 July 2018.
- Following a comprehensive communication and survey distribution program, the survey received 1,264 responses, and after data cleansing, 1,241 responses remained. The sample size provides 95% confidence that the results are within +/-3% of presented figures. Ninety-seven percent of responses were from the Asia Pacific.

The final survey report was presented by Survey Matters at the APNIC 46 EC meeting in Nouméa, and then to the community later during the conference.

The APNIC survey report was a valuable input onto the 2019 planning process.

2.9 Customer Relationship Management (CRM)

APNIC is now using Salesforce as its CRM, to coordinate external engagements and improve contact management across the organization.

Status:

- Transferred the legacy Yammer groups to Salesforce's Chatter collaboration groups for recording notes and other information about events and touchpoints.
- Implemented Member data daily synchronization from the registry database to allow interactions with Members at various events to be captured and reported in Salesforce.
- Added custom reporting and dashboards for events and engagements, and tracking of 'Event Series' such as APRICOT, IETF, PacNOG and so forth.
- Currently integrating other systems including Pardot (email management), NetSuite (ERP), calendaring, and others.
- All External Relations processes and reporting tools have been implemented within Salesforce.

3 Infrastructure Services

3.1 APNIC infrastructure services

These activities include all the technical support required to deliver services to APNIC Members and the Secretariat.

- The office telephony system was migrated to a hosted solution in August 2018, reducing ongoing operational costs.
- A new production Kubernetes cluster with support for continuous integration and deployment was built. This has helped Software and WebOps teams to test and deploy SSO for the various applications they are working on.

Projects

3.2 Data integration

An analysis in Q2 provided the basis for improving APNIC's data model for membership, contacts, and resources. This will assist data integration across multiple systems including ARMS, MyAPNIC, Salesforce, Netsuite, and events management.

The external consultant has delivered the interim report on APNIC's data dictionary, and is working on recommendations to improve long-term management of information and systems.

Status:

- Repeatable production methods for key information for regular reporting needs, for example, Secretariat and Annual Reports.
- The analysis was successfully applied to system integration between ARMS and Salesforce.
- An APNIC data dictionary of all key concepts is under development.
- A roadmap for APNIC to improve information management processes is under development.
- Systems and data integration analysis using architecture tools and techniques is under way.
- Creation of architecture responsibility within the Secretariat to drive further work is underway.

3.3 Systems development

A range of system improvements has been underway in 2018 to ensure internal systems are managed efficiently and effectively. This includes software updates and security patches on all APNIC servers, reviewing APNIC's disaster recovery system and ensuring we meet ISO 27001 standards.

Status:

- Server configuration management system (Puppet) upgrade and work is completed.
- A package management system (Pulp) for security reporting and patching across all servers.
- The HSM (Hardware Security Module) key migration for RPKI has been completed. An HSM key backup and recovery for new HSM has been created and tested.

3.4 Network consolidation and enhancements

APNIC's network services are being consolidated and optimized to reduce costs and improve performance. This includes utilizing private IPv4 address (RFC 1918) space in internal networks, completing firewall and intrusion detection, and investigating peering arrangements.

Status:

- 203.119.42.0/23 has been returned to the APNIC recovered pool.
- All peer connections have been relocated from core switches to edge switches.
- Implementation of the Cisco Firepower Firewall/IPS/IDS appliances is continuing using Active-Standby mode from testing to production.
- Initiated multilateral BGP peering with Megaport Brisbane IX and Megaport Sydney IX. Will also establish bilateral peering with various members, one by one.
- Initiated direct peering with Google Australia for testing service deployment in the cloud.
- APNIC will soon connect with AARNET for additional transit and more direct connectivity with the Research & Education community, including Euroam.

4 Member Training

4.1 Training services

- The 'Routing Basics' course was launched on the APNIC Academy in February 2018.
- A major upgrade of the APNIC Academy was launched before APNIC 46, providing many new features such as Virtual Labs and the support of third-party resources.
- The training team delivered the following face-to-face and eLearning sessions:

	Face-to-Face	eLearning
Courses	50	57
Locations	31 cities, 27 economies	
Participants	1,686	316
Training YouTube channel		54,501 views; 759 subscribers

Table 11: Training delivery

- In 2018 to 31 October, 27% of APNIC external engagements (50 out of 182), have been face-to-face trainings.

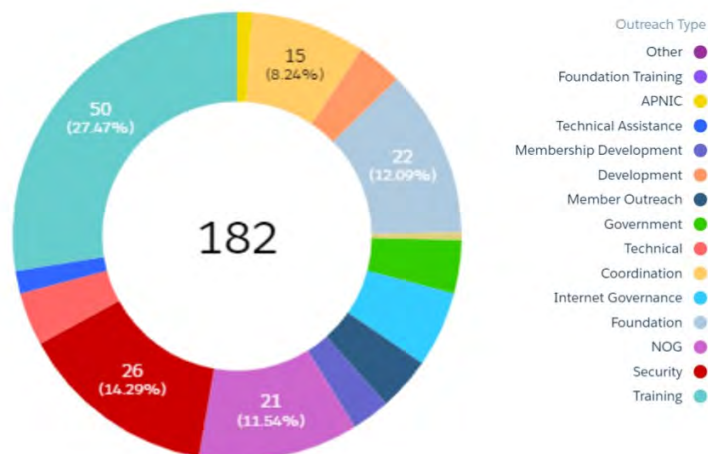


Figure 9: Types of engagement

- There were important training activities in Oceania, including New Caledonia, Vanuatu, Guam, Samoa, Tuvalu, Solomon Islands, New Zealand and for the very first time, [in Tokelau](#).
- Training activities in South-East Asia included Laos PDR, Indonesia, Philippines, Myanmar, Singapore, Malaysia, Thailand, and Viet Nam.
- IXP and Routing workshops were held in Vanuatu, Myanmar, and Brunei.
- APNIC conducted two tutorials for the first time at APAN 45 in Singapore in March 2018 and also at APAN 46 in Auckland, New Zealand in August 2018.
- In March, APNIC established a new team to manage and develop the training curriculum and content, led by the new Training Curriculum Manager, Peter Blee.

-
- In April, Tashi Phuntsho was appointed the Acting Training Delivery Manager.
 - Following APNIC 46, the training team began assisting Tonga Cable remotely with their IPv6 test deployment, clarifying their doubts and helping resolve issues they face.

4.2 Technical assistance

During 2018 APNIC provided Technical Assistance (TA) in the following economies:

Economy	Assistance provided
Tokelau	IPv6 and Network Security
Mongolia (MobiCom)	Network architecture and design Network Security IXP support: setting up PoPs and connecting to regional hubs
Mongolia (Gemnet/MISPA-IXP)	Automating route server filter configuration (RPSL tools) Re-architecting of the route server (BIRD) routing table (PIPE protocol) RPKI implementation Best practices in operating an IXP
New Caledonia (OPT)	IPv6 deployment

Table 12: Technical Assistance summary

Regional Development

5 APNIC Conferences

5.1 APRICOT 2018

[APRICOT 2018](#) was held in Kathmandu, Nepal, from 19 to 28 February 2018, at The Yak and Yeti Hotel.

Conference statistics	
Total number of on-site delegates	752
Economies represented	64
APNIC Member organizations represented	247
Remote Participants – Adobe Connect	71
Remote Participants – YouTube	1,589 views; 12,998 minutes
#apricot2018 tweets	931

Table 13: APRICOT 2018 summary

APNIC held its first ‘Hackathon’ at APRICOT 2018 with 24 participants (6 female, 18 male), focused on identifying and [resolving IPv6-related challenges](#).

APNIC supported several other events within APRICOT 2018, including an ICANN GAC Workshop, a FIRST TC, and APIX and AP* meetings.

5.2 APNIC 46

[APNIC 46](#) was held in Nouméa, New Caledonia, from 6 to 13 September 2018. The conference was held at Le Meridien Nouméa, with workshops at OPT’s training centre, Le Lys Rouge.

Conference statistics	
Total number of on-site delegates	305
Economies represented	46
APNIC Member organizations represented	92
Remote Participants – Adobe Connect	196
Remote Participants – YouTube	2,022 views; 22,742 minutes
#apnic46 tweets	503

Table 14: APNIC 46 summary

Partners that held meetings at APNIC 46 included APIX, AP*, and FIRST.

Future conferences

- APNIC 47 will be held during APRICOT 2019 in Daejeon, South Korea, from 18 to 28 February 2019.
- APNIC 48 will be held in Chiang Mai, Thailand, from 5 to 12 September 2019.
- APRICOT 2020 will be held in Oceania, but the location is not yet announced.

6 Regional Technical Development

6.1 Policy development

APNIC 45

Four policy proposals were considered at the APNIC 45 Policy SIG.

Two proposals did not reach consensus and were returned to the mailing list for further discussion:

- [prop-123](#): Modify 103/8 IPv4 transfer policy
- [prop-120](#): Final /8 pool exhaustion plan

The author for the remaining two proposals was uncontactable and did not submit revised proposals:

- [prop-118](#): No need policy in APNIC region
- [prop-119](#): Temporary transfers

During the Policy SIG, consensus was reached to change the author of prop-118 and prop-119 to allow for revised proposals to be submitted.

There was also community discussion about remote participation for the SIG Chair/Co-Chair elections.

Policy SIG Co-Chair elections were held during APNIC 45, with Ching-Heng Ku and Bertrand Cherrier both re-elected as Co-Chairs for a two-year term.

APNIC 46

Four policy proposals were considered at the APNIC 46 Policy SIG.

[Prop-125: Validation of “abuse-mailbox” and other IRT emails](#) reached consensus at the Policy SIG and the AMM. The subsequent four-week comment period on the mailing list closed without any objections on 16 October 2018. The Policy SIG Chairs have now requested the APNIC EC to endorse the proposal.

Three proposals did not reach consensus at APNIC 46 and were returned to the mailing list:

- [prop-118](#): No need policy in APNIC region
- [prop-124](#): Clarification on IPv6 sub-assignments
- [prop-126](#): PDP Update

The following proposals were withdrawn by their authors before APNIC 46:

- [prop-123](#): Modify 103/8 IPv4 transfer policy
- [prop-120](#): Final /8 pool exhaustion plan
- [prop-119](#): Temporary transfers

NIR OPMs

Four NIR Open Policy Meetings have been held in 2018: IRINN OPM, VNNIC OPM, IDNIC OPM and TWNIC OPM. APNIC attended all of these meetings. A second TWNIC OPM and IDNIC OPM are scheduled for November.

6.2 Rootserver maintenance

USP F-root relocation

Since the F-root instance hosted at the University of South Pacific (online since 2007) is due for replacement and USP was connected to the IXP in June 2018, APNIC is in discussion with them for the server's replacement and relocation to the IXP, to benefit more networks in Fiji.

PNG-IXP F-root installation

APNIC provided support for installation of an F-root instance at the PNG-IXP:

- Supplied a pair of SFP+ transceiver modules (server and switch side).
- Assisted the IXP team to reconfigure the route server to accommodate ISC's requirements.
- The root server was finally commissioned (peering with the route server) in July 2018.

TPIX K-root installation

This is supported by TWNIC. The contract between Chief Telecom and APNIC was finalized and signed. Equipment is being ordered.

6.3 Internet exchanges and measurement support

The following table summarizes APNIC's IXP support work during 2018:

Location/IXP	Type of support
Vanuatu	Two and a half-day workshop (Feb 2018) in collaboration with OGCI0; half-day session on IXP benefits and best practices
Myanmar	Three-day workshop (March 2018) in collaboration with MM-IX to discuss IXP best practices at traffic engineering
PNG-IXP	F-root installation and route leak support
Fiji IXP	Port security issues with USP connecting to the IXP
BKNIX	Sponsored the BKNIX Peering Forum, held in May 2018
MISPA-IXP, Mongolia	As part of TA, provided details on how to automate route server filters
Brunei	Conducted three-day workshop (October 2018) in collaboration with APT and AITI for establishing an IXP in Brunei
IXP-DB and PeeringDB	Sponsored IXP-DB system development and PeeringDB service
APIX and Peering Asia	Sponsored and supported the APIX meeting at APNIC 45, and sponsored Peering Asia 2.0
IXP Manager	In discussion with INEX for sponsorship of IXP Manager software development specifically on RPKI support

Table 15: IXP support

6.4 Network Operator Group support

- APNIC has participated in 21 NOGs during 2018, and sponsored 13, as follows.

NOG	Region	Date	Sponsored
JANOG 41, 42	APNIC	Jan, Jul	✓
HKNOG 6.0	APNIC	Mar	✓
PhNOG 2018	APNIC	Mar, Jul	✓
CaribNOG 15	ARIN	Apr	
bdNOG 8	APNIC	May	✓
ThaiNOG 2018	APNIC	May	✓
btNOG 5	APNIC	Jun	✓
TWNOG	APNIC	Jun	
PacNOG 22	APNIC	Jun	
SGNOG 6	APNIC	Jul	✓
MyNOG 7	APNIC	Jul	✓
IDNOG 5	APNIC	Jul	✓
SANOG 32	APNIC	Aug	✓
VNNOG 2018	APNIC	Aug	✓
INNOG 2018	APNIC	Aug	✓
AusNOG 2018	APNIC	Aug	
HKNOG 6.1	APNIC	Sep	✓
LACNOG 2018	LACNIC	Sep	
NANOG 74	ARIN	Sep	

Table 16: NOG support and sponsorship

6.5 Security support

- New Security section on the APNIC website deployed in January 2018.
- APNIC supported the APCERT steering committee, and hosted a FIRST Technical Colloquium (TC) Kathmandu during APRICOT 2018.
- In March, APNIC spoke at the FIRST TC in Osaka, and conducted LEA trainings in Hong Kong and Taiwan.
- In April, APNIC provided an instructor for the Annual CSIRT Training (APISC 2018), organized by the KISA in Seoul. APNIC also helped conduct a three-day security workshop with PITA in Guam.
- In June, APNIC helped Papua New Guinea organize a workshop for APEC TEL SPSG, and conducted LEA training in Fiji for participants from Pacific economies. APNIC also participated in the FIRST Conference in Kuala Lumpur, Malaysia, and assisted the ITU with a two-day security workshop in Tonga.
- In July, APNIC conducted a Security workshop for MYREN members in Kuala Lumpur, to cover 'Practical Incident Response and Community Honeynet'.

-
- APNIC presented at the 'Asia Regional G7 24/7 High Tech Crime Network Point of Contact Workshop on Whois'. This was the first collaboration with the G7 High Tech Crimes network and a good opportunity to meet LEAs from ASEAN.
 - APNIC presented in cybersecurity conferences organized by national CERTs in the region: TWCERT/CC Conference in Taipei (September); Mongolia CERT in Ulaanbatar; and IDSIRTII's FIRST TC Bali.
 - In October, APNIC participated and presented at the APCERT Annual Conference and AGM in Shanghai. This event was also held with the FIRST Asia Pacific Regional Symposium.
 - APNIC hosted a FIRST Technical Colloquium (TC) at APNIC 46. This event was also supported by APCERT.
 - APNIC participated at the APEC TEL 58 in Taipei, and was invited to present in the Social Media Security workshop organized by Thailand.
 - APNIC was invited to present at the 'Hong Kong Police Force Cyber Security Seminar' in October.

Projects

6.6 CERT development

APNIC is providing support for the development of security incident response capabilities in the Asia Pacific region with advice, technical training, and facilitating multistakeholder engagement.

Status:

- In January, APNIC attended the launch of PNG CERT in Port Moresby. APNIC also delivered a two-day technical workshop as part of the launch.
- In March, APNIC assisted GEANT to conduct TRANSITS-I (CERT/CSIRT Development) training at APAN 45 held in Singapore with funding from Asi@Connect/TEIN. This was the second time APNIC collaborated with GEANT and Asi@Connect on TRANSITS training.
- In April, a two-day CERT engagement session was organized in Samoa.
- In May, the APNIC Pacific CERT Workshop was conducted in Tonga with participants from multiple Pacific economies, to support CERT development in the Pacific.
- In August, APNIC assisted GEANT to conduct TRANSITS (CERT/CSIRT Development) training at APAN 46 in Auckland.
- At APNIC 46, the second Regional Pacific CERT Workshop was conducted in Noumea, New Caledonia. The participants also attended the Nouméa 2018 FIRST TC and the APNIC 46 conference.
- In September, APNIC provided the following support for the PNG CERT in Port Moresby:
 - Review of CERT activities, plans and resources
 - Setting up backend systems for handling incidents
 - Analysis of common types of security incidents
 - Discussions (meetings) with PNG CERT stakeholders
- In October, APNIC helped coordinate a security and system administration workshop for Tonga CERT. The workshop was conducted and supported by the FreeBSD Foundation.

6.7 Integrated information services

After Member Survey feedback (2016) APNIC is testing options for gathering and providing aggregated operational and technical data from APNIC and the APNIC community.

Status:

- A Product Manager, Sofia Silva Berenguer, was assigned to the Information Services product family.
- The Data Gathering and Analysis BoF took place during APRICOT 2018 in Nepal, including the following presentations:
 - Creating better local Internet maps in the Asia Pacific region (BGP Data Collection project; Sofia Silva Berenguer, APNIC)
 - Isolario Project: tools and activities (Alessandro Improta, IIT CNR)
 - Data Collections & Benchmarking (Bijal Sanghani, Euro IX)
- The Data Gathering and Analysis BoF at APNIC 46 was organized.
 - Sofia Silva Berenguer (APNIC) presented an update on the Information Services products.
 - Philip Branch (Swinburne University of Technology) presented on 'Rapid detection of BGP anomalies' (which received an ISIF Asia grant).
 - Christian Teuschel (RIPE NCC) presented on RIPEstat and possible collaboration to help network operators in the APNIC community.
- Internet Directory
 - Work has been done on the reimplementation of the Internet Directory (at <https://stats.apnic.net>), which launched in September.
 - At APNIC 46, APNIC recruited participants for user testing activities.
- Routing Information product:
 - Problem validation was done during APNIC 46 with selected community members, with a change of focus to communication issues network operators experience when trying to solve routing issues.
 - More user research is being prepared for better understanding of the new problem we are focusing on.
 - Work with Isolario has been parked as its focus is not on BGP data collection anymore.
 - Options for deployment of a RIS collector at APNIC are being considered.
- Network Security product:
 - Dean Pemberton (external consultant) and APNIC staff, Adli Wahid and Jamie Gillespie, assisted with problem validation.
 - Work has been done on processing honeynet data to identify holders of IP addresses originating malicious traffic. This data was used in mockups for solution validation during APNIC 46.
 - Good feedback was received during APNIC 46 (both during user testing sessions and during the Data Gathering BoF).
 - Now working on developing a MVP, expected to be ready for testing during APRICOT 2019.

- Other information products

- New Internet Directory was launched.
- Work is being done on new releases of the Internet Directory incorporating new features.
- Collaboration with the RIPE NCC on RIPEstat is being explored.

7 Community Engagement

7.1 Community sponsorship

In addition to NOGs (see NOG Support), APNIC has committed to these community events in 2018:

- NPSIG 2018, Nepal
- APriGF 2018 and PaclGF 2018, Vanuatu
- APIGA 2018, South Korea
- INSIG 2018, India
- PKSIG 2018, Pakistan
- APT Connectivity Workshop at APT PRFP-11, Western Samoa
- AINTEC 2018, Thailand
- NetHui 2018, New Zealand
- NPIGF 2018, Nepal
- BDSIG 2018, Bangladesh
- Internet Week 2018, Japan

APNIC is a sponsor of the Schools of Internet Governance (SIGs) through [APASA](#), a collaboration between APNIC, ICANN, DotAsia, and the Internet Society.

APNIC is a paid member of APT, ITU, PTC and the Internet Society in 2018.

7.2 Fellowships

The [Fellowship committee](#) for APNIC 46 was recruited in April and [Fellowship](#) applications closed in June 2018 with 442 applications received from 29 economies.

A total of [68 Fellowships](#) were offered. After acceptances, 62 Fellows from 17 economies attended APNIC 46, including 24 females. The majority of Fellows (51) were from Pacific Island economies.

	Professional	Youth	Returning
Male	33	2	3
Female	17	2	5

Table 17: APNIC 46 Fellows

This was the largest fellowship group ever assembled for an APNIC conference. Sponsorship provided by OPT-NC and the APNIC Foundation allowed APNIC to expand the program for APNIC 46 to help benefit the Pacific.

Four fellows presented at APNIC 46, and a summary of the fellowship experience was written for the [APNIC Blog](#).

7.3 Government and sub-regional liaison

APT

- participated in APT preparatory events for the ITU Plenipotentiary (PP) Conference, in Hanoi, Melbourne, and Kuala Lumpur.
- with ISOC co-hosted a successful social event for delegates in Melbourne.
- collaboration grew in 2018, with three partnerships with APT members, for IPv6 training in Sri Lanka and Bhutan and an IXP training in Brunei.

ITU

- annual IPv6 workshop with the ITU, in collaboration with the Thailand government and the TOT Academy, 14 to 18 May 2018.
- partnered with ITU in two direct IPv6 country assistance engagements, in Brunei and Mongolia.

APEC TEL

- participated at the APEC TEL 57 meeting in Port Moresby, Papua New Guinea, and presented on IoT security and IPv6.
- participated at the APEC TEL 58 meeting in Taipei, Taiwan, and presented a five-year trend on IPv6 statistics in the region.

7.4 Community outreach

APNIC staff have attended and shared information about APNIC's activities at 46 community events during 2018. APNIC Member Gatherings were held in Ulaanbaatar and Dhaka, attended by 37 Member representatives.

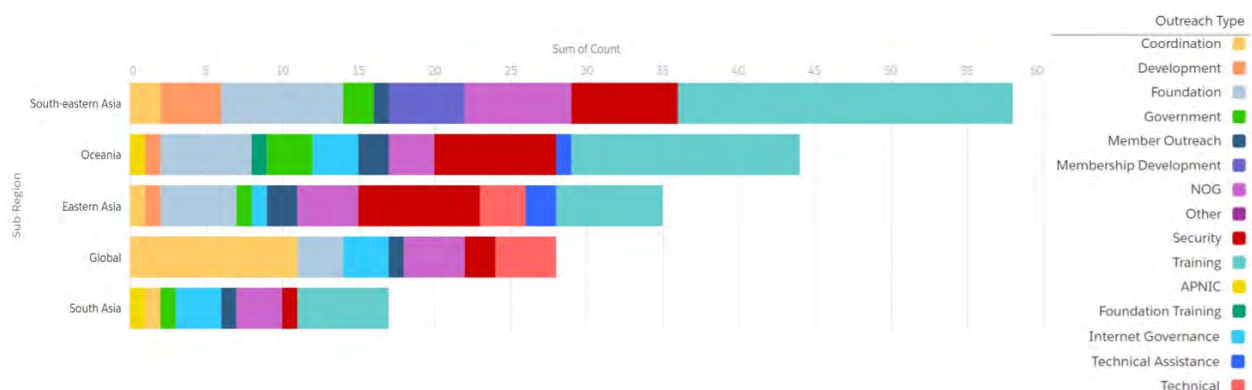


Figure 10: Community Outreach engagements

APNIC authors have published 177 posts on the APNIC Blog during the year (see [section 2.3](#) for more details), with community engagement via APNIC's social media detailed below.

		Q1 2018	Q2 2018	Q3 2018	Q4 2018
Facebook	Reach	139,688	78,839	186,727	1,979,605
	Likes	26,782	27,024	27,414	27,566
Twitter	Followers	8,491	8,942	9,229	9,368
	Engagement	2,711	3,337	3,302	901
YouTube	Views	12,252	6,955	10,428	2,455
	Minutes	82,037	39,129	67,004	16,017
Slideshare	Views	32,707	30,172	38,503	11,788
LinkedIn	Reach	29,321	11,943	27,807	7,716
	Followers	2,865	3,009	3,158	3,217

Table 18: APNIC Social Media activity

Cooperation SIG

- Theme at APNIC 45 was ‘Whois accuracy: Present status and its challenges’ and featured [presentations](#) from APNIC, RIPE NCC, ICANN GAC's Public Safety Working Group (PSWG), Nepal Police, and Hurricane Electric.
- There was an election for the Cooperation SIG Co-Chair, with Bikram Shrestha elected as the SIG Co-Chair for a two-year term.
- The theme of the SIGTheme at APNIC 46 was ‘Whois: Challenges of data protection and privacy’, featuring [contributions](#) from representatives of ICANN, APNIC, the Chinese government, and the banking and security communities.

NIR SIG

- At APNIC 45 NIR SIG session, CNNIC, VNNIC, TWNIC, IDNIC, IRINN and JPNIC provided update [presentations](#). At APNIC 46, [presentations](#) were made by KRNIC, CNNIC, VNNIC, TWNIC, IDNIC and JPNIC.
- The term of NIR SIG Chair, Shyam Nair, ended at APNIC 46. Co-Chair Zhen Yu assumed the role of Acting Chair until APNIC 47 when another election will be held.

7.5 Internet governance

Regional and local IGFs

- Supported the APriGF in Vanuatu in August 2018, with sponsorship (for fellowships primarily), workshop proposals, and attendance. APNIC partnered with other organizations to submit four workshop proposals.

-
- Sylvia Cadena serves as Co-Chair of the APriGF MSG.
 - Participated in a planning meeting for a new Australian Internet Community Forum in Canberra.

Schools and Academies

- attended the first School of Internet Governance in Nepal (NPSIG), and presented the IPGO card game, an educational tool to explain IP addressing and network fundamentals.
- participated in the third Asia Pacific Internet Governance Academy (APIGA), co-organized by KISA and ICANN, in Gwangju, South Korea, presented an improved IPGO card game.
- presented the IPGO card game during then India School on Internet Governance (INSIG 2018) in New Delhi.

Global Internet governance related activities

- supported the APNIC Foundation to participate in the ITU's annual WSIS Forum, where ISIF Asia was awarded a WSIS Champions prize (see 8.2).
- participated in the second IGF MAG meeting in July in Geneva
- IGF 2018 held in Paris, France, from 12 to 14 Nov 2018. APNIC staff planned and participated strongly. Sylvia continues as an appointed member of the IGF MAG.

Projects

7.6 Research & Education community outreach

In 2018 APNIC is working to build closer relations with the regional Research & Education (R&E) community.

- APAN 45, Singapore, March 2018:
 - APNIC sponsored APAN 45 and conducted a [poster](#) session to attract membership.
 - APNIC conducted two one-day tutorials (SDN & Network/Internet Security) at APAN 45, the first training sessions APNIC conducted directly at an APAN meeting.
 - We assisted GEANT to conduct TRANSITS-I (CERT/CSIRT Development) training at APAN 45 with funding from Asi@Connect/TEIN.
- APAN 46, New Zealand, August 2018:
 - APNIC provided sponsorship for APAN 46, and helped to recruit APAN fellows from the Pacific.
 - The training team conducted two one-day tutorials (DNS/DNSSEC and Network Security).
 - APNIC again assisted GEANT to conduct TRANSITS-I (CERT/CSIRT Development) training with funding support from Asi@Connect. This was the third time APNIC collaborated with GEANT.
- In July, APNIC conducted a Security Workshop for MYREN members in Kuala Lumpur, Malaysia, to cover 'Practical Incident Response and Community Honeynet'.

-
- APNIC will soon connect to AARNet for better connectivity to R&E networks, eduroam and other services.
 - APNIC has been talking to the Australian Access Federation (AAF) about joining, and through them, joining eduGAIN to tap into their large R&E user base for the APNIC Academy.
 - APNIC is preparing to renew the MoU with TEIN*CC for closer collaboration.
 - With support from the APNIC Foundation and the KDDI Foundation, APNIC held an Advanced Network Security workshop with UCSY/mmREN in September 2018 in Yangon, and will hold another in December 2018.

7.7 Increasing participation

APNIC is working to build Member participation in APNIC community processes, with a focus on the Policy Development Process (PDP).

Activities to date include:

- [Facebook Live webinars](#) on policies to be discussed before the APNIC 45 Policy SIG session (attracting 353 views) and APNIC 46 Policy SIG session (573 views).
- Two blog post previews of the [APNIC 45](#) and [APNIC 46](#) Policy SIG sessions.
- A summary of the four policies for discussion at APNIC 45, translated into seven languages (Chinese – Simplified and Traditional, Japanese, Hindi, Bahasa Indonesian, Thai, and Vietnamese); and a translated summary of the Policy SIG outcomes.
- Online promotion to APNIC 45 and 46 delegates to encourage attendance at the Policy SIGs.
- APNIC held a session at NPSIG 2018 to encourage engagement in APNIC activities including the PDP and Policy SIG at APNIC 45, as part of a pilot project which began in 2017. One third of the people contacted during the pilot project attended the conference.
- A policy engagement presentation was given at PacNOG 22, SANOG 32, VNIX-NOG 2018, the TWNIC OPM and IRINN OPM, and is scheduled for NPNOG 4. The presentation was also delivered during the APNIC 46 Newcomers' session.
- An APNIC Academy course on the PDP was completed and scheduled for launch in Q4. A beta version of the course was taken by APNIC 46 Fellows before the conference.
- A summary of the four policies for discussion at APNIC 46, translated into seven languages (Chinese – Simplified and Traditional, Japanese, Hindi, Bahasa Indonesian, Thai, and Vietnamese); and a translated summary of the Policy SIG outcomes.
- An email invitation was sent to all APNIC Members to join the APNIC 46 Policy SIG meeting at the conference or remotely.
- A mock Policy SIG was held during the [Newcomers'](#) session at APNIC 46 to introduce the concepts of the SIG to first-time conference attendees.
- The first of [six blog posts](#), looking back at policies that have made a significant impact, was published at the end of October with the remaining posts scheduled for November.

8 APNIC Foundation

8.1 Governance and administration

Board

The Board adopted its first Mission statement: 'To increase investment in Internet development in the Asia Pacific region, through education and training, human capacity building, community development, research, and related projects and activities'; and Vision statement: 'To have a global, open, stable and secure Internet that is affordable and accessible to the entire Asia Pacific community'.

The Foundation's first Annual General Meeting (AGM) and Board meeting was held in Hong Kong on 17 May 2018. Resolutions approved audited financial statements; adopted a range of fraud, personnel and WHS policies; and elected Sylvia Sumarlin from Indonesia as the Chair.

Due diligence was completed on three new candidates for consideration by the EC at their meeting in Bhutan. Two new Board members have been confirmed for appointment: Mr. Danish Lakhani from Pakistan and Mr. Michael Malone from Australia (bringing the total to five, with two positions still vacant). The Hong Kong regulatory processes were finalized for their appointment to the Board. This completes their appointment processes ahead of the next full board meeting in the first half of 2019.

8.2 ISIF Asia

WSIS Champion

ISIF Asia was one of four projects recognized as a Champion in the annual WSIS Prize contest (International and Regional Cooperation category). Sylvia travelled to the WSIS Forum to participate in the Champions ceremony in March 2018.

Grants and awards

For its 2018 Grants and Awards, ISIF Asia received 236 nominations in four funding categories (Network Operations Research; Cybersecurity; Community Networks; and Gender Empowerment and Innovation), from 28 economies across the region, including 122 for the new Gender category, funded by IDRC. Four separate Selection Committees were established, including 16 subject-matter experts from the community. Funding for this round was provided by the IDRC, ISOC, and APNIC.

As a result USD 210,000 will be allocated to 10 projects (8 grants and 2 awards) across 4 funding categories, with the awards ceremony held during IGF 2018 in Paris.

8.3 Foundation activities

Projects

Following the establishment of TONGA CERT in 2016, the CERT project for the Pacific supported 2 new CERTs during 2018: the PNG CERT in January and Vanuatu CERT in June 2018.

- The second portion of funding (AUD 100,000 for 2018-19) was confirmed.
- A first regional CERT workshop was held in Tonga in May with technical officers from the Cook Islands, Fiji, Papua New Guinea, Samoa, the Solomon Islands, Tonga, and Vanuatu.

-
- The second regional CERT workshop was held at APNIC 46 in Noumea, with sponsored delegates from seven Pacific economies.

The new project 'Enhancing National Cybersecurity and Network Quality of Service in Advance of Papua New Guinea's Hosting of APEC' (Papua New Guinea training) provides up to eight technical training workshops for APNIC Members and the PNG community, CERT and IXP training and support.

- Four members of the PNG technical community were sponsored to attend APNIC 46 for training and conference participation.

The PNG training project completed 11 community engagements, technical assistance activities and technical training workshops, including training workshops on routing, network security and management and the DNS. It also provided support for the PNG CERT and IXP communities.

Funding approved and fundraising

- Funding for the project entitled 'Enhancing National Cybersecurity and Network Quality of Service in Advance of Papua New Guinea's Hosting of APEC' (Papua New Guinea training) was changed to USD. Total amount received by APNIC Foundation is USD 343,354.35:
 - Up to eight technical training workshops (approx. USD 274,354.35)
 - CERT training and development (approx. USD 33,925.00).
 - IXP training and support (approx. USD 35,075.00).
- Approved AUD 558,000 in funding for 'Enhancing National Cybersecurity and Network Quality of Service in Advance of Papua New Guinea's Hosting of APEC', via the San Francisco-based Asia Foundation with support from New Zealand and Australia. The funding will support:
 - Up to eight technical training workshops (approx. AUD 280,000)
 - CERT training and development (approx. AUD 108,500).
 - IXP training and support (approx. AUD 90,000).
- Approved AUD 108,000 in funding for a new project 'Combating Cybercrime 'Safe havens': Building a well informed and trained cyber law enforcement community in the Pacific'.
- Three proposals have been drafted and are under discussion with potential partners: SWITCH: Fostering women's leadership in the Internet industry in the Mekong region; Community Networks deployment in PNG; and a PhD/Master's scholarship program.
- Approved AUD 75,000 in funding for PNG CERT to support the development of the CERT in terms of hardware, software, and training.
- The Foundation achieved over AUD 1 million in funding in its first 18 months of operation, from donors including the Asia Foundation, the Internet Society and the governments of Australia, New Zealand, and Canada.

Community engagement

Duncan Macintosh and Sylvia Cadena participated at the following events during this period:

Where	Date	Activity	Staff member
JANOG	Jan	Participation	Duncan
MoC, Japan	Jan	Meeting	Duncan
KDDI Foundation	Jan	Meetings	Duncan
JICA	Jan	Meetings	Duncan
APRICOT 2018	Feb	Participation (10th anniversary of ISIF Asia)	Duncan, Sylvia
Kadoorie Foundation	Feb	Meeting	Duncan
Asia Society	Feb	Meeting	Duncan
Australian Aid Conference	Feb	Participation	Duncan, Sylvia
DFAT	Feb	Meeting	Duncan, Sylvia
APrIGF prep	Feb	Site visit	Sylvia
Advisory Council meeting of the Partnership for Online Platforms and Sustainable Development (POPS)	Mar	Meeting	Duncan
WSIS Forum	Mar	MAG meeting, ISIF Asia WSIS Award	Sylvia
Australian Members of Asian Venture Philanthropy Network (AVPN)	Apr	Presentation on ISIF Asia experiences for health innovations	Sylvia
Digital ASEAN organized by the World Economic Forum	Apr	Workshop	Duncan
Foundation AGM	May	AGM, Board and strategy meetings	Duncan, Sylvia
Asian Development Bank	May	Meeting	Duncan
AVPN	June	Meeting Participation at the Annual Meeting	Sylvia, Duncan
Foundation meeting	June	Meeting	Duncan, Sylvia
PNG IXP, PNG CERT, and PNG training	June	Project meeting to discuss events	Duncan
PNG Visit	July	Community engagement	Duncan

Where	Date	Activity	Staff member
IGF 2nd Open Consultation and MAG Meeting	July	Meeting	Sylvia
APrIGF 2018	Aug	Meeting	Sylvia
2nd session of Asia Pacific Information Superhighway Steering Committee	Aug	Meeting	Duncan
APNIC 46	Sep	Meeting	Sylvia
ADB Digital Forum	Sep	Meeting	Duncan
Beijing	Sep	Meeting	Duncan
IDRC event	Sep	Meeting	Sylvia
New York and Washington	Sep	Meetings	Sylvia
SOCAP	Oct	Conference	Duncan
Washington	Oct	Meeting	Duncan

Table 19: APNIC Foundation engagement summary

Global Cooperation

9 Global Technical Community

9.1 RIR collaboration

APNIC serves as Chair of the NRO EC in 2018, and chairs the Engineering, Registration Services and Communications Coordination Groups (ECG, RSCG, CCG).

During the first cycle of RIR meetings, Paul Wilson participated in three RIR meetings: ARIN, LACNIC and AFRINIC. He presented APNIC and NRO update reports. The APNIC EC and APNIC staff participated in ARIN 42, LACNIC 29, RIPE 76 and AFRINIC 28. At RIPE 76, Geoff Huston presented on IPv6, Measuring ATR, and TCP and BBR and Sofia Silva Berenguer engaged with the NREN community. At LACNIC 29, Sofia presented on APNIC's products.

The major topic of consideration for the NRO in 2018 has been the ASO Review, and all RIRs held community consultation sessions during the first half of the year.

Before APNIC's consultation in February during APNIC 45, APNIC held a webinar to provide information about the ASO review process. Two blog posts (ASO Review discussions gaining momentum at APNIC 45; ASO Review: Moving forward) were published on the ASO Review. Another consultation session was held during APNIC 46, followed by an online survey. The APNIC community was very clear that the ASO should continue to appoint ICANN Board members and be a decisional player in ICANN's empowered community.

During the second cycle of RIR meetings, Paul Wilson participated at RIPE 77. The APNIC EC and APNIC staff participated at ARIN 43, LACNIC 30 and RIPE 77.

9.2 Collaboration with I* Organizations

ICANN 61 was held in San Juan, Puerto Rico. Paul Wilson spoke on behalf of the NRO during the Opening Ceremony, which had more than 1,000 attendees. There were many engagements with governments and members of the ICANN community. Initial discussions about the ASO Review process were held with ICANN staff and its board. The NRO EC had a face-to-face meeting during this time.

The IETF held its 101 meeting in London in March 2018. APNIC gave presentations on IPv6 and measuring ATR.

ICANN 62 was held in Panama City and the most important topic for discussion was whois and data privacy. Paul Wilson wrote a blogpost on this subject and there were discussions at the APriGF and APNIC 46, with further discussion planned for the IGF 2018.

During ICANN 62, the CEOs of the five RIRs met with the Chairman and CEO of ICANN to discuss their ongoing relationship via the ASO, and future collaboration.

ICANN 63 was held in Barcelona, Spain. Progress on the ASO Review was reported at a meeting between the ASO and the ICANN Board. After the ICANN meeting there was a meeting of the leaders of the I* organizations, including the new ISOC CEO.

9.3 Other forums

- APNIC had 182 engagements up until 31 October. Twenty-seven percent were face-to-face trainings (50 so far). The second category of engagements is related to security, 14% of the total, with 26 engagements, half of them dedicated to the development of CERTs in the Pacific.
- Support for CERTs in the Pacific continues, with the launch of two new CERTs in Papua New Guinea and Vanuatu. There were important engagements in Samoa and Tonga; some in collaboration with the ITU.
- Thirty percent of APNIC's engagements were in South-East Asia, with 22 face-to-face trainings, seven NOG events (2 PhNOG, SGNOG, IDNOG, ThaiNOG, MyNOG) and two Open Policy Meetings (VNNIC and IDNIC).
- Twenty-two percent of APNIC's engagements were in Oceania, including two NOGs (NZNOG, AusNOG, and PacNOG) and three intergovernmental meetings (APEC TEL, APT, and an ASEAN), in addition to the CERT-related work.
- Seventeen percent of APNIC's engagements were outside the APNIC region, including seven RIR meetings, three ICANN meetings and two IETF meetings.

9.4 Engagement coordination

Below are some stats on events and engagements, noting that many events feature multiple engagements:

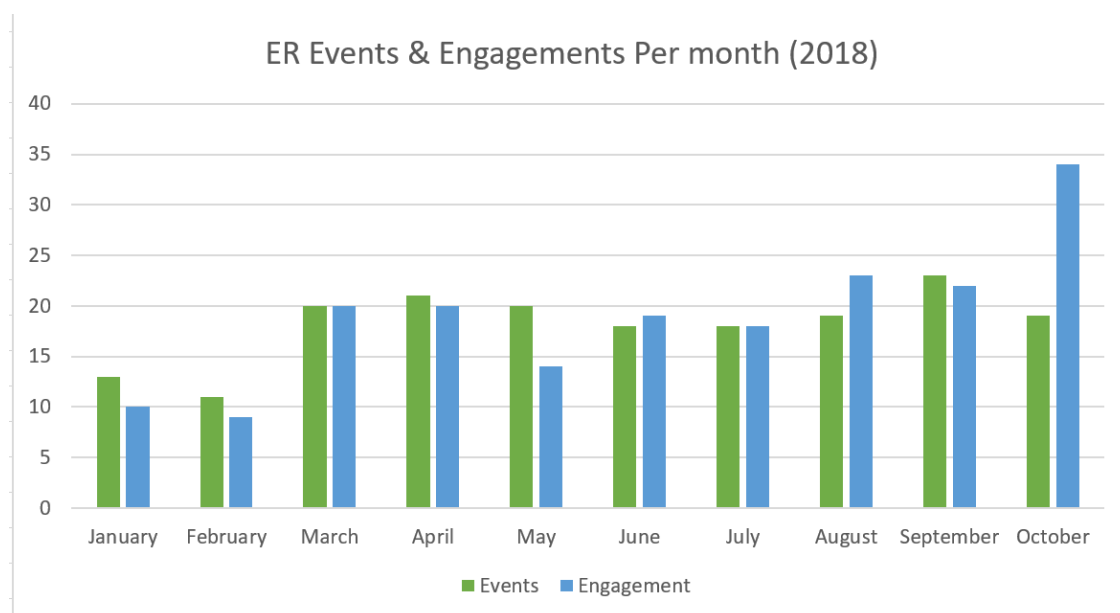


Figure 11: Engagements per month

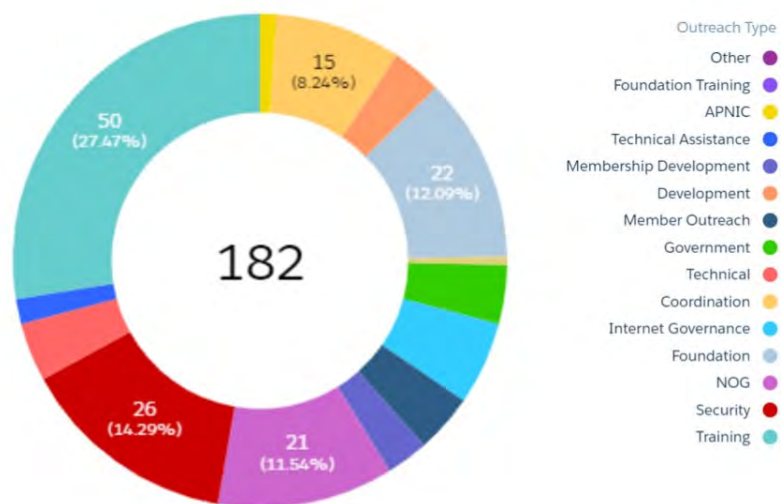


Figure 12: Engagements per category

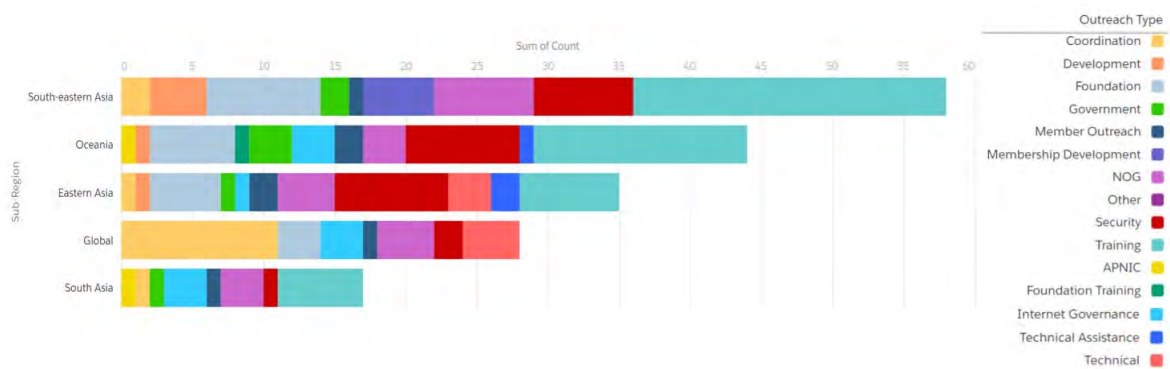


Figure 13: Engagements per sub-region

Projects

9.5 NRO Chair

APNIC is the Chair of the NRO this year. The NRO EC, comprising the five RIR heads, holds a monthly teleconference, and face-to-face meetings as the opportunity arises. The agenda in this period has included:

- ASO Review – follow up of the review recommendations, in particular, the planning for community consultation across all the RIR communities on the future structure of the ASO.
- Discussion about email from an AFRINIC community member about board issues at AFRINIC, to which the NRO EC decided not to respond.
- [IANA Review Committee report](#) that recommends to the NRO EC that IANA has met the SLA during the period being reviewed (1 April to 31 December 2017).
- ICANN board seat #9 election.
- NRO 2017 expenses report review and approval of the 2018 budget.
- NRO contributions to other organizations for 2018 (ICANN, IGF).
- The progress of Coordination Group projects as reported in the next section.
- A face-to-face NRO EC meeting during ICANN 62, which Paul chaired.
- The NRO discussed and submitted a [reponse](#) to US government NTIA's notice of enquiry on the International Internet Policy Priorities stating that the IANA transition should not be unwound.
- A framework for personal data in the Internet number registry is under discussion.
- Concerns about representation of the technical community at the IGF MAG were raised with the MAG Chair.

9.6 NRO projects

The Coordination Groups include the Resource Services Coordination Group (RSCG), Engineering Coordination Group (ECG) and the Communications Coordination Group (CCG). The groups meet regularly via teleconference and face-to-face to discuss ongoing and project work.

RSCG Projects

Identifier Technology Health Indicators (ITHI) project

This ICANN project is developing metrics to measure the 'health' of identifier systems to improve their security, stability, and resilience. The NRO has agreed to contribute metrics in relation to Internet number resources, under RSCG coordination.

Status:

- Initial draft of metrics developed for Internet number resources.
- Community consultation on NRO website completed.
- Detailed measurement is currently being discussed and refined before more development work will be undertaken.
- Publication of metrics will start from 2019.

Registry and whois accuracy

The RSCG is considering initiatives to improve data accuracy and is developing documentation on RIR requirements.

Status:

- A draft document containing data accuracy requirements by RIR's policies, agreements and operational practices for further review by the RSCG is underway.

Resource transfer improvements

The work undertaken by the RSCG is to review and document RIR practices and make recommendations for inter-RIR transfer improvements.

Status:

- All the RIRs are working on a presentation to share practices and document interaction procedures.

NRO resource statistics presentation

In collaboration with the CCG, new slide deck template and content is being developed, including RIR transfer statistics.

Status:

- Slide template is completed.
- Content development is underway, for launch in 2018.

CCG Project

NRO website redesign

The NRO website is undergoing a redesign to improve user experience and content management.

Status:

- The proposed new site design was approved by the NRO EC and the completed new website was launched in October.

IGF presence and promotion

The NRO will arrange a booth at the IGF 2018 in Paris, France, from 12 to 14 November to raise awareness of the role and responsibilities of the global Internet number community.

Status:

- RIR communications teams will staff a booth during the IGF and distribute promotional 'scratch-it' competition postcards in delegate bags and at the event to attract attendees to the booth to learn about the RIRs and Internet numbers.

ECG Projects

RDAP

The ECG is analysing the RIRs' RDAP implementations for consistency and alignment.

Status:

- Initial RDAP compliance testing is being done.
- Feedback from the RIRs is being gathered, to be added to a formal repository.
- The ECG is planning to implement a mechanism to capture the feedback from the RIR communities.
- The ECG has generated an initial list of issues and is currently working on resolving these issues.

To increase consistency in the RDAP service across the RIRs, the ECG has adopted a document outlining a common RDAP profile.

RPKI

The ECG continues to work on improving RPKI standards and implementations.

Status:

- The IETF proposal 'RPKI Validation Reconsidered' was approved and is documented under [RFC 8360](#). The deployment of this RFC will reduce the overall fragility of the RPKI.
- A deployment of this RFC was discussed at IETF 102 in July 2018. A deployment draft will be submitted and presented at IETF 103 in Bangkok, Thailand from 3 to 9 November 2018.

Unified reporting

The ECG is working on unifying RPKI and Statistics measurements across all the RIRs.

Status:

- The first drafts of both these metrics were reviewed.
- The RPKI draft specification was reviewed, and is being currently being implemented.
- The current statistics measurements were reviewed and updated and are in production.

Work on RPKI measurements continue, with a target to complete initial measurements by the end of this year.

Standardized file format

The ECG is identifying opportunities for using standardized file formats to ensure interoperability.

Status:

- The Delegated Extended Statistics and Transfer Log file formats are in draft and will be documented in a revision-controlled repository.

Work on the Delegated Extended Statistics file format is ongoing with additional input from the recent ECG meeting. The Transfer Log file format document is complete.

10 Governmental Outreach

10.1 Inter-governmental liaison

This is a year of the ITU Plenipotentiary Conference, which sets the strategies and objectives for the ITU for the next four years, to be held in Dubai in November 2018. Some of the issues that are more controversial are the:

- Role of the ITU in the Internet and Internet governance.
- Prospect of having another WCIT (to reopen negotiations on the ITRs).
- Role of the ITU in the Digital Objects Architecture and supporting the Global Handle Registry.
- Role of the ITU in cybersecurity-related topics.

The annual IPv6 workshop with the ITU was held in Bangkok in May 2018, in collaboration with the Thailand government and the TOT Academy.

APNIC has supported the APNIC Foundation to participate at the WSIS Forum, the IGF MAG, and activities related with Co-Chairing the APriGF MSG.

APNIC participated in all three APT regional preparatory meetings for the ITU Plenipotentiary Conference.

APNIC also participated in APEC TEL 57, in Port Moresby, Papua New Guinea and APECTEL 58 in Taipei, Taiwan. Many preparations are underway for the hosting of the APEC Leaders Meeting in Papua New Guinea in November this year. Progress was made in the operationalization of the CERT in Papua New Guinea.

In October, APNIC presented at a conference about cyber stability in Geneva, organized by UNIDIR. This conference gathered inputs from the private sector and technical community, to be considered in UN discussions about cybersecurity.

11 Global Research

11.1 Global research and measurements

Research topics conducted by Geoff Huston and Joao Damas during this period include:

- KSK rollover investigations, including resolver characterization and user impact measurement.
- Promoting the approach described in draft-huston-kskroll-sentinel as an alternative approach to testing the extent of user impact of a KSK roll.
- IPv6, Extension Headers and IPv6 Fragmentation.
- Measuring the extent of latent QUIC capability.
- DNS related research with ICANN (contract extended to 2018).
- Investigation into the dynamic behaviour of BBR (Google's new TCP flow control algorithm).
- Ongoing activity with the ICANN SSAC and SSR2 Committees.
- Investigation of DNSSEC and its role in NSEC caching.
- Open resolver collaboration with Cloudflare.

-
- DNS ATR measurement.
 - ITHI DNS measurement (funded by ICANN).

11.2 Technical advocacy at global forums

Published articles and presentations during this period include:

Articles:

- DNS and DDOS
- Hiding the DNS
- Helping Resolvers to Help the DNS
- Network Neutrality – Again
- A Workshop on Internet Economics
- BGP in 2017
- Addressing 2017
- Peak DNSSEC?
- Crypto Zealots
- DNS OARC 28 report
- Just One Bit
- Stuff the Camel into the Bikeshed
- Measuring Root Zone Trust
- Measuring ATR
- What Drives IPv6 Deployment
- Another 10 Years Later
- The Uncertainty of Measuring the DNS
- An Update on Securing BGP from IETF 102
- Measuring ECDSA in DNSSEC – A Final Report
- DNSSEC and DNS over TLS
- The Law of Snooping
- Measuring the KSK Roll
- DOH!
- Securing the Routing System at NANOG 74
- Diving into the DNS
- Has Internet Governance become irrelevant?
- Analysing the KSK Roll

Presentations:

- TCP and BBR (Canberra Linux Users Group)

-
- IoT (ATSE)
 - The Death of Transit and Beyond (IAB Tech Talk, HKNOG, Thousand Eyes, ISOC-CA)
 - The Rise and Rise of Content Distribution Networks (CAIDA Workshop on Internet Economics)
 - DDOS, DNS and DNSSEC (NZNOG 2018)
 - Measuring DNS ATR (DNS OARC, IETF)
 - TCP and BBR (REDIRIS.ES Conference, RIPE 76)
 - Measuring ATR (RIPE 76)
 - Reasons for IPv6 Deployment (RIPE 76)
 - Heisenberg's DNS (Security Workshop)
 - Who am I talking to? (Security Workshop)
 - That KSK Roll (NANOG 76)
 - KSK Roll Results (ICANN 63)
 - DNS Privacy (ESNOG 22)

Corporate

12 Human Resource Management

12.1 Secretariat staffing

Please refer to the HR Report.

12.2 Organizational development

Please refer to the HR Report.

12.3 Staff retention and development

Please refer to the HR Report.

12.4 Product Management

During 2018, APNIC adopted a formal 'Product Management' approach to development of systems and services. This defines a process for developing and improving any APNIC products (including MyAPNIC, Registry services, APNIC Academy and others) and key steps in product lifecycle, including:

- Idea/Problem validation: Starting with a new idea, and the problems it is intended to solve, validate that proposal with user interviews and research, to refine or reject the idea.
- Solution validation: Validate that the proposed solution will address the problems as intended, by testing mockups or prototypes, and gathering feedback about user experience and interface design.
- MVP: Build a 'Minimum Viable Product' with features that represent the functionality of the product, and collect additional user feedback.
- Build/launch/operate: Build, launch, and operate version 1.0 (or the next version) of the product.
- Repeat: Repeat this process to maintain a prioritized list of features for subsequent product releases; until finally retiring the product when the problem/need no longer exists.

From 2018, APNIC is following this process, and increasing engagement with Members and other users in testing and overall 'lifecycle management' of selected products (starting in APNIC 45 and 46). The prior Software Engineering team is now known as the APNIC Products Team, with specific product management responsibilities assigned to individual staff.

13 Finance and Administration

13.1 Financial management

Finance statistics to date

KPI Dashboard Finance Team YTD KPI (2018)					
Number of	Oct-18	Avg/Mnth	YTD	2017	2016
Phones Calls (Outward)	263	214	2141	3253	3500
RTs Received (Total)	2545	2218	22177	25444	21396
E-Bill Queue	1795	1614	16135	16379	15331
Finance Queue	240	155	1548	1385	1328
Accounts Payable Queue	101	95	953	1241	1261
Bounce Queue	184	150	1498	3908	1415
Inward Payment Queue	225	204	2043	2319	2051
Accounts Receivable					
APNIC Member Count	37	52	7067	6547	5994
New Members	56	69	687	844	1030
New Non-members	3	1	13	11	18
Receipts Processed	843	733	7329	8061	7514
Invoices issued	914	741	7410	8264	7537
Credit notes issued	60	33	333	550	529
Accounts Closed (Mem and Non Mem)	33	19	192	332	322
Closure Notice sent	93	80	801	994	945
Reactivation Members	6	2	20	31	45
Reactivation fee waived	0	0	1	2	8
Refund Members (Duplicate and Over-payment)	29	8	83	73	68
Accounts Payable					
Asset Created	20	13	132	260	189
Asset Disposal	0	8	81	76	127
PO created by Finance	27	50	500	488	213
PO Billed	173	170	1704	1957	1947
Supplier EFT Payment	66	74	742	932	891
Nexonia Reimbursement Payments	57	37	374	429	386
Credit Card Payment	552	338	3383	3936	3377
Journals processed	97	89	887	833	888
Cash Advance Request	4	3	27	21	18
Vendor Request	8	6	59	97	141
Foundation Support Transactions	458	292	2923	2454	1046
NRD Support Transactions	25	22	218	756	537

Figure 15: Finance KPIs

13.2 Office management

A new visitor/contractor management system has been deployed at the APNIC office, ensuring all visitors are identified before entry, staff notified, and ID tags printed.

Business IT will also be working on multiple projects over the coming months to improve current solutions including Office 365 with more training for end users, and a review of Office 365 governance. This will also include selection of a granular backup solution that will provide off-site backups including email, SharePoint document storage, and OneDrive.

The Business IT Team is conducting a review of NetSuite and secure access methods. Multi-factor/SSO authentication solutions are being deployed for staff access to internal systems.

13.3 Travel management

Travel management statistics to date

Travel Statistics*		YTD OCT 2018	YTD OCT 2017	Change %
Sectors flown:				
	Domestic	96	71	35%
	International	1150	830	39%
	Trans Tasman	10	9	11%
		1256	910	38%
Hotel room nights:				
	Domestic	53	23	130%
	International	921	791	16%
	Trans Tasman	31	18	72%
		1005	832	21%

*Booked through APNIC's Travel Management Company, excludes external bookings

Figure 16: Travel statistics

Travel review

A review of APNIC's end-to-end travel processes is underway with initial project scoping completed in April 2018. The project team was formed in September and a pilot implementation of a new online travel, booking system and travel expense management system will commence in Q1 2019. Initial work to reduce administration in the approval process in preparation for these trials was completed in October.

During the last quarter, changes were made to the travel process to improve the efficiency of processing. The treatment of travel allowances and tolls used to book travel and record travel expenses are being investigated, with any new approach to be implemented and tested by the end of 2018.

14 Legal and Governance

14.1 Legal counsel and business advisors

Maddocks Lawyers were engaged to review all of APNIC's employment and independent contractor agreements for consistency. This was completed in June 2018.

Craig Ng has provided legal consultation to the Services area in relation to a number of requests for resource transfers.

14.2 Workplace health and safety compliance

Please refer to the HR Report.

15 Facilities

15.1 Building and office facilities

There were changes to desk configurations and relocation of staff to support organizational changes at the start of 2018.

The new media room was completed in October and is currently in use; refurbishment and improvements to the front entrance with new tiles, new tactile indicators, and new safety nosings will be completed by the end of 2018.

Plans to upgrade existing bathrooms on Level 1, and install bathroom facilities on Level 2, have been completed and are included in the budget for completion during 2019.

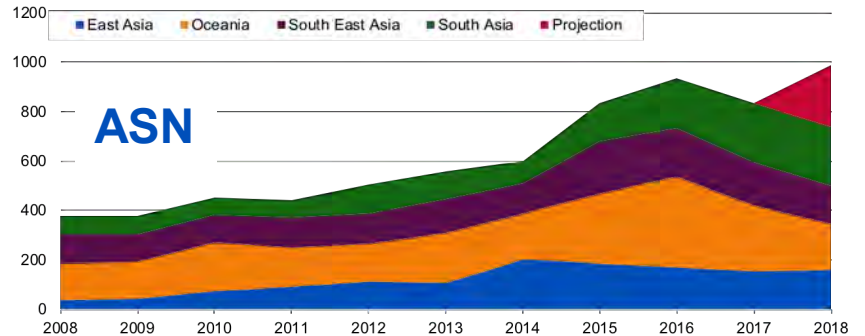
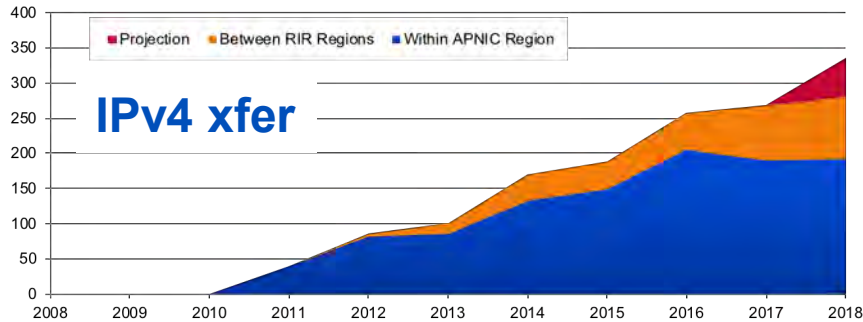
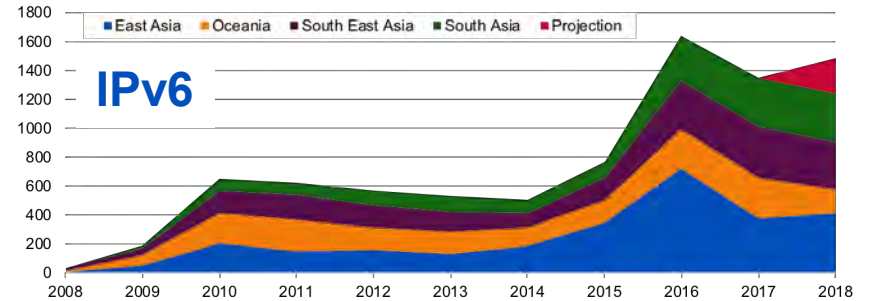
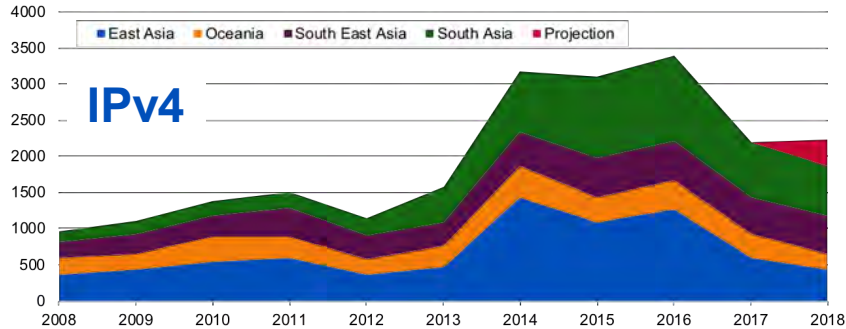
APNIC Secretariat Report

1 Jan to 31 Oct 2018

APNIC EC meeting
5 December 2018
Montevideo, Uruguay



Resource Transactions





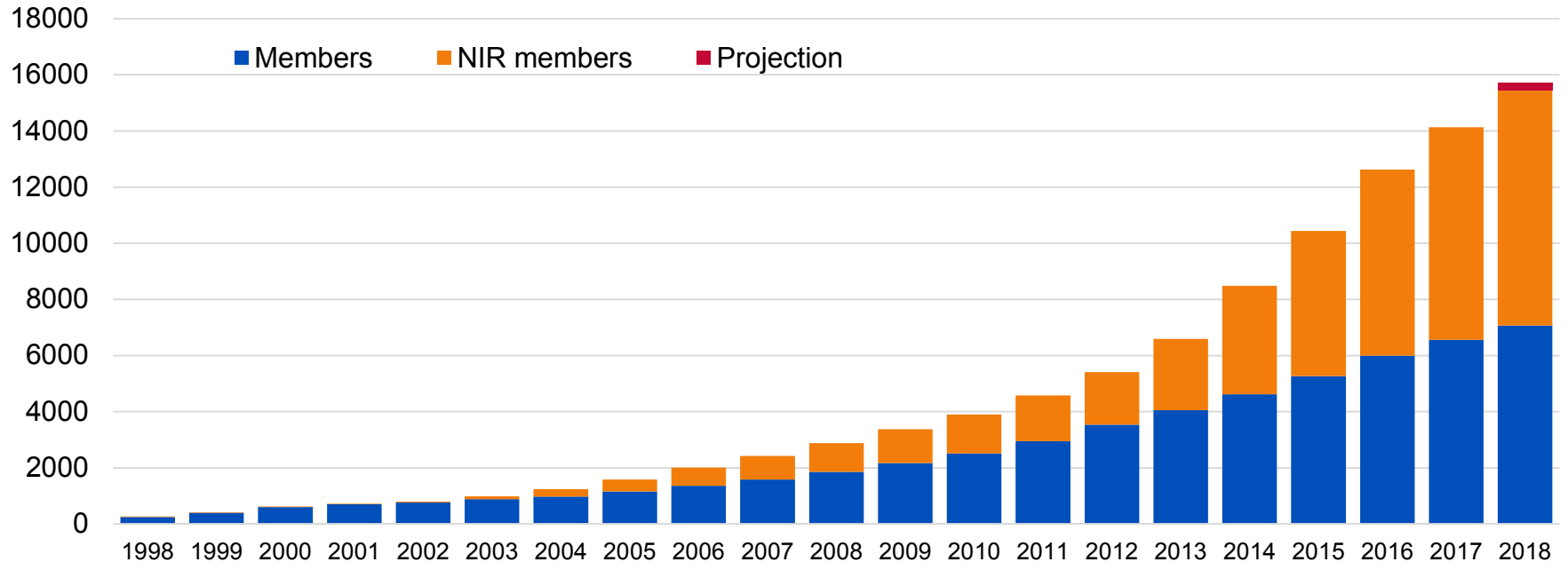
Resource Certification

Resource Certification	1 Jan 2018	Current
Members created certificates	13.0%	14.4%
Members created ROAs	7.4%	9.0%
IPv4 under ROAs	3.3%	5.0%
IPv6 under ROAs	0.9%	5.85%





Membership



As at 31 Oct

MyAPNIC



MyAPNIC ZEN MYAPNIC-TEST-AP LOGOUT

Home Resources Admin Contact Tools Events Voting My Profile

Home / Administration / Account Details Confirmation

Contact Review & Update

To meet [Resource Management Policy](#), you must keep all your contact details up-to-date. Please review and update your contact information below.

A green tick indicates other users have already reviewed and confirmed the records.

If you do not have the permissions to edit all records, please escalate this to your Corporate Contacts or the person responsible for the information.

STEP 1
Membership contacts
Please review contact details associated with your membership.

[Add new contact](#)

Full name	Email	Phone	Mobile	Job title	Corporate ?	Billing ?	Technical ?	Edit ?	Delete ?	Permissions ?
CC Name	cc-email@apnic.net		555-543-1234		*					
BC Name	cc-email@apnic.net	555-555-5555								
TC Name	tc-email@apnic.net									

Add IRT Object

Add IRT Object

☐ Info
If you want to use an IRT object this entry exists in whois.apnic.net. (Add Existing IRT Object) button to register that object.

IRT name: (RT-AMERICAN-TEST-AP)

Network abuse email: abuse@apnic.net

Mailbox: MARTHA-TEST

Address line 1: 1234 Main Street, Suite 100, San Francisco, CA 94102

Address line 2:

Address line 3:

Address line 4:

[Submit](#)

COMING SOON

- Performance improvement
 - Ave page load improved by 12%
- Under development 2018
 - Contact validation and update
 - Annual review reminders
 - Transfer automation
 - Homepage update
- Authentication
 - SSO
 - Deprecation of certificates
- RPKI AS0 ROA creation

apnic.net/myapnic



Service Partners

- Trial to improve outreach to APNIC Members according to local needs
- Status
 - NEPALREN – agreement signed on 27 March 2018
 - Two more candidates (PCTA and MYNOG) are being enrolled
 - In October, received first Service Partner referral



Technical Infrastructure

- Systems Development
 - ‘Puppet’ upgraded
 - ‘Pulp’ to improve package management
 - Upgrade of hardware security model for RPKI completed
- Network Consolidation
 - 203.119.42.0/23 returned to the recovered pool
 - Implementation of Cisco Firepower Firewall/IPS/IDS
 - Initiated peering with Megaport IX (Brisbane and Sydney)
 - Initiated direct peering with Google Australia for testing service deployment in the cloud
 - Signed up with AARNET for additional transit



Training & TA



training.apnic.net

Face-to-face training Economies Trainees	50 27 1,686
eLearning sessions Trainees	57 316
Training videos Views	129 54,501
Technical Assistance	4



Empowering the Internet community
through online education



Online Courses



Virtual Labs



Video Tutorials



Cisco Full Mesh Router (Sandbox) Lab

2h 00m

This full mesh virtual lab topology has been set up with 6 x Cisco CSR 1000V routers, 4 x Linux test machines and 1 x Linux configuration host. You can play with BGP, OSPF, IS-IS, DHCP, Flexible NetFlow, SNMP, NETCONF, and much more!



Cisco SLAAC/DHCPv6 Router Lab

2h 00m

Learn step-by-step how to configure a Cisco router and Linux hosts for SLAAC and DHCPv6 using our interactive Lab instructions and virtual devices.



MikroTik Full Mesh Router (Sandbox) Lab

2h 00m

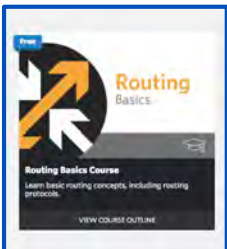
This full mesh virtual lab topology has been set up with 6 x MikroTik routers, 4 x Linux test machines and 1 x Windows 10 configuration host (running WinBox). You can play with BGP, OSPF, MPLS DHCPv6, QoS, OpenFlow, and much more!



MikroTik SLAAC/DHCPv6 Router Lab

2h 00m

Learn step-by-step how to configure a MikroTik router and Linux hosts for SLAAC and DHCPv6 using our interactive Lab instructions and virtual devices.



- Relunched August 2018
 - Virtual labs
 - New partner courses
- Free public access
 - SSO via APNIC Login
 - Enrolled: 1,206
 - Certified: 888
- New courses
 - PDP
 - IPv6 (coming)
 - Security (coming)

academy.apnic.net



APNIC 45 / APRICOT 2018



- Kathmandu, Nepal
19 to 28 February 2018
 - 5-day conference
 - 5-day workshops (5 tracks)
- IPv6 Hackathon
 - 24 participants
- Also included
ICANN GAC workshop,
APIX, AP* and FIRST TC
meetings

Conference statistics	
Total number of on-site delegates	752
Economies represented	64
APNIC Member organizations represented	247
Remote participants – Adobe Connect	71
Remote participants – YouTube	1,589 views; 12,998 minutes viewed
#apricot2018 tweets	931

APNIC 46



- Nouméa, New Caledonia
6 to 13 September 2018
 - 3-day conference
 - 5-day workshops (4 tracks)
- 62 Fellows from 17 economies
 - 24 female
 - 4 Youth, 8 Returning
- Also included
APIX, AP* and FIRST TC
meetings

Conference statistics	
Total number of on-site delegates	305
Economies represented	46
APNIC Member organizations represented	92
Remote participants – Adobe Connect	196
Remote participants – YouTube	2,022 views; 22,742 minutes viewed
#apnic46 tweets	503



Policy Development Process

- New APNIC Academy course on PDP
- Webinars, mock policy SIG
- Updated web content
- Translation of summaries and outcomes
- Blog post series on significant policies
- 2018: 7 proposals
 - 1 Approved by consensus
 - 3 Withdrawn by author
 - 3 Continuing discussions





Policies (1)

- prop-118: No need policy
 - Remove the requirement to demonstrate need when transferring IPv4 addresses into or within the APNIC region
 - APNIC 46: no consensus, returned to mailing list
- prop-119: Temporary transfers
 - Essentially the same as a normal transfer, but with an end-date, after which the registration will revert to the original holder
 - Withdrawn by author
- prop-120: Final /8 pool exhaustion
 - APNIC to manage two waiting list pools, the recovered pool and the 103/8 pool
 - Withdrawn by author



Policies (2)

- prop-123: Modify 103/8 IPv4 transfer policy
 - Allows the transfer of 103/8 addresses without the 5-year restriction
 - Withdrawn by author
- prop-124: IPv6 sub-assignments
 - Clarifies the definition of assigned address space for IPv6 delegations
 - APNIC 46: no consensus, returned to mailing list
- prop-125: Validation of “abuse mailbox” etc
 - Periodic verification of IRT objects the basic rules for verification
 - APNIC 46: Reached consensus, now awaiting EC endorsement
- prop-126: PDP Update
 - Updates to section 4 of [APNIC Policy Development Process](#)
 - APNIC 46: no consensus, returned to mailing list

IXP Support



Location	Type of support
Vanuatu	Two and a half-day workshop (Feb 2018) with OGCIO; IXP benefits and best practices
Myanmar	Three-day workshop (March 2018) with MM-IX on IXP best practices in traffic engineering
PNG	F-root installation and technical support at PNG-IXP
Fiji	Port security issues with USP connecting to the IXP
Bangkok	Sponsored the BKNIX Peering Forum, held in May 2018
Mongolia	Support to MISPA-IXP on automating route server filters
Brunei	Three-day workshop (October 2018) with APT and AITI on IXP establishment
IXP-DB	Sponsored IXP-DB system development and PeeringDB service
APIX and Peering Asia	Sponsored and supported APIX at APNIC 45, sponsored Peering Asia 2.0
IXP Manager	Proposed sponsorship of IXP Manager development for RPKI support



NOG Support

- 22 NOGs so far in 2018

Month	Events
January	NZNOG 2018, JANOG 41
March	HKNOG 6.0, PhNOG 2018
April	CaribNOG 15
May	bdNOG 8, ThaiNOG 2018
June	btNOG 5, TWNOG, PacNOG 22
July	SGNOG 6, MyNOG 7, PhNOG Davao, JANOG 42, IDNOG 5
August	SANOG 32, VNNOG 2018, INNOC 2018, AusNOG 2018
September	HKNOG 6.1, LACNOG 2018
October	NANOG 74



Security Support

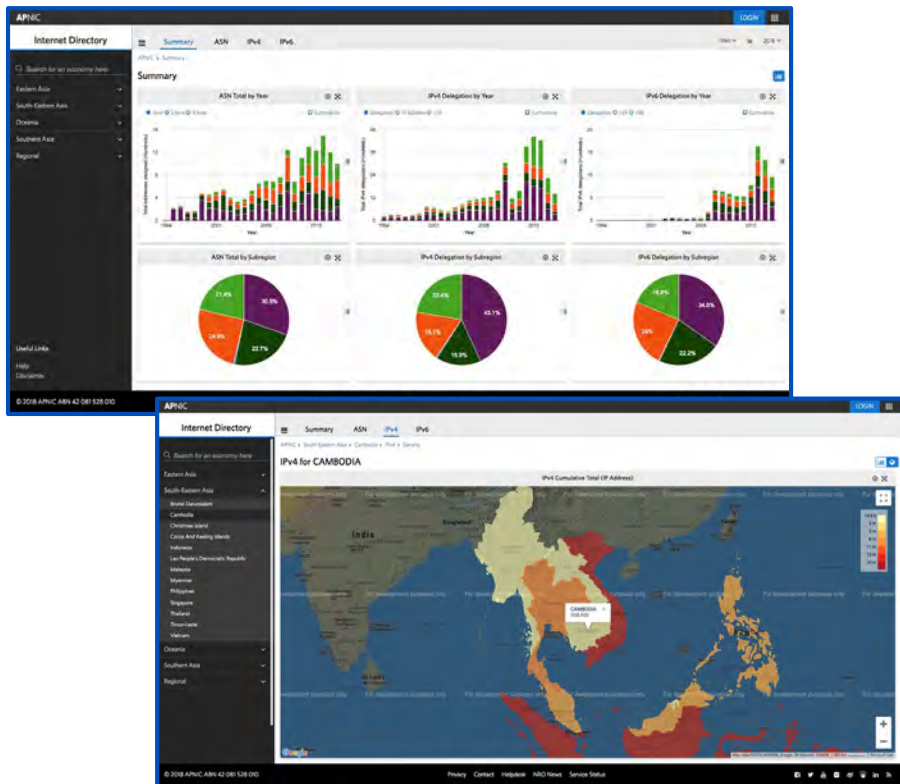
- **APCERT** Steering Committee meeting at APRICOT 2018
- **FIRST** TC at APRICOT 2018
- FIRST Conference, Malaysia
- FIRST TC in Osaka, Japan
- LEA training in Hong Kong, Taiwan and Fiji
- APISC 2018 in Seoul, South Korea (with KISA)
- **APEC TEL** 57 SPSG workshop
- **ITU** Windows security workshop
- **MYREN** Security workshop
- **G7** High Tech Crimes Network
- FIRST TC at APNIC 46
- APEC TEL 58
- Hong Kong Police Force Cyber Security Seminar



Pacific CERT Support

- Supporting CERTs with mentoring, training, and technical assistance
- AUD 200K funding via **APNIC Foundation** (two years)
- Launch of **PNG CERT** (Jan 2018), two-day technical workshop
- Two-day **CERT workshop** in **Samoa** (Apr 2018)
- CERT workshop in **Tonga**: 24 delegates from five economies (May 2018)
- Assisted GEANT with TRANSITS training at **APAN 45** (Mar 2018) and **APAN 46** (Aug 2018)
- Second regional **CERT workshop** at **APNIC 46** (Sep 2018)
- Support for **PNG CERT** (Sep 2018)
- Security and system administration workshop at **Tonga Cert** (Oct 2018)

Information Products



- BoFs at APNIC 45 and 46
- Improved stats launched in Q3
 - Internet Directory
- Routing Information product under development
 - Testing at APNIC 46
- Network Security product under development
 - Testing at APNIC 46

stats.apnic.net



Community Sponsorships

- **NPSIG** 2018, Nepal
- **APrIGF** 2018 and **PacIGF** 2018, Vanuatu
- **APIGA** 2018, South Korea
- **INSIG** 2018, India
- **PKSIG** 2018, Pakistan
- APT Connectivity Workshop at **APT PRFP-11**, Western Samoa
- **AINTEC** 2018, Thailand
- **Nethui** 2018, New Zealand
- **NPIGF** 2018, Nepal
- **BDSIG** 2018, Bangladesh
- **Internet Week** 2018, Japan



Governmental Engagements

- **APT** preparatory meetings for **ITU Plenipot** (Nov)
 - Jan in Viet Nam (second meeting)
 - Jul in Australia (third meeting)
 - Aug in Malaysia (fourth meeting)
- Annual **IPv6 workshop** with ITU, 14 to 18 May
 - **Direct country assistance** in Brunei and Mongolia
- **APEC Tel 57** in PNG (Jun), and TEL 58 in Taiwan (Sep)
 - Presented on IPv6 and IoT security
- **UNIDIR** Cyber Stability Conference (Oct)
 - Related with Paris Peace Conference and **Paris IGF**



Internet Governance

- **NPSIG** 1 (Jan), Kathmandu
- **WSIS Forum** (Mar), Geneva
- **APIGA** 3 (Jul), Seoul
- Australian Internet Community Forum planning (Jul), Canberra
- **INSIG** 2018 (Sep), New Delhi
- **APrIGF** 2018 (Aug), Vanuatu
 - Sylvia Cadena, Co-Chair of the MSG
 - APNIC sponsored fellowships and four workshop proposals
- **IGF 2018** (Nov), Paris
 - Sylvia Cadena continues, Rajesh Chharia appointed to the MAG
 - Two workshop proposals, 8+ panel sessions

Social Media Activity



	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Facebook				
• Reach	139,688	78,839	186,727	1,979,605
• Likes	26,782	27,024	27,414	27,566
Twitter				
• Followers	8,491	8,942	9,229	9,368
• Engagement	2,711	3,337	3,302	901
YouTube				
• Views	12,252	6,955	10,428	2,455
• Minutes	82,037	39,129	67,004	16,017
Slideshare				
• Views	32,707	30,172	38,503	11,788
LinkedIn				
• Reach	29,321	11,943	27,807	7,716
• Followers	2,865	3,009	3,158	3,217



ASO Review consultation (Feb)

- Strawman proposal
 - From WG chairs, after discussion on the mailing list
 - Based on Option 3 (two-house model) of the ASO Review report and discussions of the ASO Review Working Group
- Strong support to a two-house ASO structure
 - Policy Council and Registry Council replace ASO AC and NRO EC
 - But no consensus on the number of members or the selection mechanism
- Members of the APNIC community continue to participate in the wg-aso-review mailing list

ASO Review consultation (Sep)



- Third consultation held at APNIC 46
- Online survey results:
 1. ASO should continue to appoint ICANN Board members (93%)
 2. The ASO should be a decisional player in ICANN's empowered community (97%)
 3. ICANN participation as "ASO" preferred (46%)
 - But significant number don't care (34%)
 4. RIR community members should participate in ASO review negotiations (83%)
- Next steps to be determined



NRO Projects

- APNIC is the Chair of the NRO in 2018
- Discussion topics include the ASO Review, AFRINIC Board issues, IANA Review Committee report, ICANN Board seat #9 election
- Response to NTIA's notice of enquiry on International Internet Policy Priorities stating that IANA transition should not be unwound
- Framework for personal data in the Internet number registry system
- Coordination group projects include:
 - ECG: RDAP, RPKI, Unified reporting
 - RSCG: ITHI, registry and whois accuracy, resource transfer improvements
 - CCG: Website redesign, IGF participation



Product Management

- Product Management approach adopted to developing systems and services
- Defines process of developing and improving APNIC products, including:
 - Idea/problem validation
 - Solution validation
 - MVP
 - Build/launch/operate (Agile process)
 - Retire

Salesforce



OUR APNIC

Latest All Company Posts

- Biddle Mitchell (6/12/2018, 9:43 pm)
Cloudflare has released a performance-themed...
- Biddle Mitchell (02/12/2018, 15:54 pm)
List of all the servers that have been killed during the...
- Brad Pooking (23/11/2018, 7:07 pm)
Business IT Systems: Salesforce Migration Complete
- Brad Pooking (21/12/2018, 3:35 am)
Business IT notification on scheduled maintenance

Trending Groups

- EVENT | APNIC WPT 11
- EVENT | BUNGO 23
- EVENT | APNIC 20
- Internet Week 2018

New Groups

- TWNC IP OPM
- ITU SIG2
- TWING
- 20AC 5th ANNUAL APNIC OPM

Recent Popular Posts

- Sunny Chendi (27/11/2018, 8:09 pm)
Great positive speech by the Honorable Ambassador...
- Sunny Chendi (28/11/2018, 11:58 pm)
Setting up NTP as a high priority for APNIC in 2019!
- Kris Allen (29/11/2018, 8:04 pm)
Kris Allen has submitted a possible Powercat...
- Kris Allen (04/12/2018, 4:09 pm)
@GPO-WP 1546

My Group List

- CHAT | All Company
This is the default group for everyone in the APNIC network. All Post Notifications (up)
- CHAT | General Security Topics

20 Upcoming Events

- CPO Asia Certification Course Singapore - 30
22/12/2018 - 30/12/2018
Event Status: Attending
Registration: None

TWNC IP OPM

Owner | Every Post | New Contact | Manage Members | New Touchpoint

Chatter | Engagement

Post | Poll | Question | Announcement

Share an update...

Most Recent Activity

George Kuo
2 December 2018 at 4:29 PM
@Sunny Chendi @George Kuo
https://open.spotify.com/track/33181/presentation/2770304.pdf
https://open.spotify.com/track/33181/presentation/2770303.pdf
The presentations are uploaded now.
We're catching up with TWNC this week to follow up with their next step.

Like | Comment | Share

1 comment · 2 views

Events (1)
TWNC IP OPM
View All Records

Touchpoints
Meeting with Ting Li (C-AN)
Meeting with Sunny Huang, Chantika Wajayajungs
Meeting with CHUNGANTON-TH
View All Records

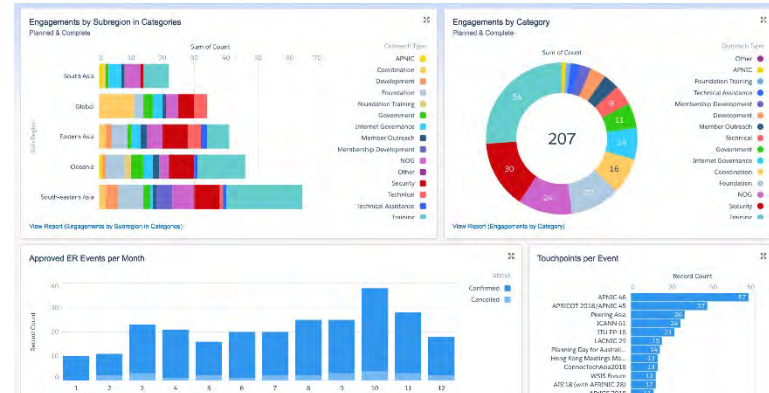
IMG_20181127_124415_01.jpg

CONTACTS

Recently Viewed

50 Items - Update a few seconds ago

NAME	ORGANIZATION NAME	PRIMARY ROLE	PREFERRED NAME	PREFERRED EMAIL	DIV.	CONTACT
1. Jan Lindeke	Google International, LLC	Role	Jan Lindeke	janl@google.com	System	ALL OC
2. Suning Tian	CAC Capital	CHAIRMAN	sunwang	sunwang@cac-capital.com	Paul	
3. Yuxiao Li	CyberSpace Administration of China	Secretary-General of IAC	Li Yuxiao	lyuxiao@cyber-space.cn	Paul	
4. William Lee	Malaysian Communication and Multimedia Co.	Director of International Affairs	William Lee	william@comcast.gov.my	Louise	
5. Joane Korosuki	International Telecommunication Union	Regional Director	Joane Korosuki	joane.korosuki@itu.int	Paul	
6. Nick Hyrka	REN Network Coordination Centre	Communications Manager (E...)	Nick Hyrka	nick@rnp.net	Paul	LinkedIn
7. Kaili Kan	Beijing University of Posts and Telecommunications	Professor	Kaili Kan	kaili.kan@gmail.com	Duncan	
8. Kenny Huang	Taiwan Network Information Center	CEO	Kenny Huang	huang@twnic.net.tw	Paul	
9. Chantika Wajayajungs	Internet Corporation for Assigned Names and N...	Security, Stability and Resili...	Chantika Wajayajungs	chantika.wajayajungs@icann...	Paul	LinkedIn
10. Ting Li (C-AN)	National Communications Commission	Chairperson	Nicole Shale	nicole@ncc.gov.tw	Paul	
11. Cheng Hong Cho	Taiwan Network Information Center	Chairman	Cheng Hong Cho	chc@twnic.net	Paul	
12. Wanwan Al-Aubaidi	Government of Thailand	Advisor to Permanent Secret...	Wanwan Al-Aubaidi	wanwan@digital.go.th	Kris	
13. Koji Fujimura	Ministry of Digital Economy and Society	Assistant Permanent Secretary	Koji Fujimura	koji.fujimura@maec.go.jp	Paul	
14. Shiro Fujimura	Fukuoka University	Professor	Shiro Fujimura	shirofujimura@fukuoka-u.ac.jp	Paul	
15. Brahima Sanou	Personal Casualty	Role	Brahima Sanou	brahima@sanou.name	Paul	
16. Jean-Christophe Fridolf	Personal Casualty	Marketing Expert	Jean-Christophe Fridolf	jcf@chiffre.gov	Paul	
17. Liu Zhiqiang	Ministry of Industry and Information Technology	Deputy Director General	Liu Zhiqiang	zhiqiang@miit.gov.cn	Duncan	
18. Joanna Chew	Singapore Internet Exchange Foundation	Senior Manager Good Business	Joanna Chew	joanna.chew@sigif.org.sg	Sylvia	
19. Marco Oishi	International Telecommunication Union	Head, ICT Applications and C...	Marco Oishi	marco.oishi@itu.int	Paul	LinkedIn
20. Francois Forder	UN Department of Economic and Social Affairs	Interregional Adviser on Sub...	Francois Forder	ff22@gmail.com	Paul	LinkedIn
21. Saranya Srivastava	UN Economic and Social Commission for Asia a...	Chief	Saranya Srivastava	ssrivastava@un.org	Duncan	
22. Abhaya Dhruvi	UN Economic and Social Commission for Asia a...	Chief of ICT and Developm...	Abhaya Dhruvi	adhruvi@un.org	Sylvia	





Workplace Health and Safety

- Incident/Hazard monitoring
 - Quarterly WHS Committee meetings
- Compliance training (all staff and EC)
 - Prevention of bullying and sexual harassment
 - Anti-discrimination
 - Equal Employment Opportunity
 - Fraud awareness
- First Aid recertification
 - training for Area Wardens and volunteers
- Risk assessments and WHS due diligence
 - Completed for APRICOT 2018 and APNIC 46
- Briefing for Kams as WHS rep from APNIC EC

Thanks!

Agenda 16

Policy endorsement



Request for EC Policy Proposal Endorsement

prop-125: Validation of “abuse-mailbox” and other IRT emails

Proposal text: prop-125-v001

Synopsis

This policy requires periodic verification of IRT object email contacts in the APNIC Whois (including "abuse-mailbox", "email", "admin-c" and "tech-c"), and establishes the basic rules for performing such verification, to ensure IRT contacts are as accurate as possible.

It describes detailed conditions required in order for contacts to be considered valid (including handling and individual response by recipients), specific timelines required for response to validation requests, and escalation actions in case of non-response.

Current status

Version 1 of this proposal reached consensus at the APNIC 46 Open Policy Meeting and subsequently at the APNIC 46 APNIC Member Meeting.

Consensus was maintained during the four-week comment period with no objections raised. The APNIC Policy SIG Chairs have now formally [asked the APNIC EC](#) to endorse the proposal for implementation.

For details of the proposal's progress through the PDP, please see:

<https://www.apnic.net/community/policy/proposals/prop-125>

Implementation

Changes to hostmaster/helpdesk procedures and registration system software are required before implementation. The policy provides a reasonable level of detail but the detailed workflow involved in the validation process (including the specific validation mechanism, response tracking, and escalation steps and conditions required in case of non response) will require detailed design and testing.

As already reported at the APNIC 46 Open Policy Meeting, implementation may take six months rather than the usual three months, due to the administrative complexity of this policy.

Changes to the policy document and call for editorial comments could follow implementation.

Agenda Item 17

APNIC Foundation update

Foundation update



Contents

1. Board update
2. Funding and projects
3. New funding and proposals

Board update 1

Five Board members – two vacant positions

1. Sylvia Sumarlin – Indonesia (chair)
2. Edward Tian - China
3. Sharad Sanghi - India
4. Michael Malone - Australia
5. Danish Lakhani – Pakistan

Board update 2

1. EC invited to propose names for remaining two positions
2. Suggested criteria:
 1. Fund raising expertise (requested by existing Board members);
 2. From un-represented regions (such as Southeast Asia and the Pacific)
 3. Women
 4. Reduce the focus on entrepreneurs and business owners
3. Need at least 4 candidates to conduct due diligence on.

Board update 3

Next Board meeting:

1. Planning started for second board meeting - first half of 2019
2. APRICOT proposed and being discussed.
3. Agenda items include: approval of second audited financial statements; strategy discussion; review process for CEO position.

Funding - PNG training project

Funding

- Total funding USD 558,000 (USD 383,000 from Australia; USD175,000 from New Zealand).
 - USD 343,323 for technical training, cyber security and IXP support (APNIC Foundation)
 - USD 214,677 for cyber security and regulatory engagement (Asia Foundation)

Impact

- 12 training, engagement and assistance activities in 3 months (Aug to Nov) to support the APEC summit.
- Largest ever training program involving an APNIC member economy.
- Workshops on routing; network management; network security and DNS.
- Technical assistance for PNG CERT and PNG IXP and APNIC46 fellowships

Funding – Pacific CERT project

Funding

- AUD 200,000 for national CERT training and technical assistance
- June 2017 to June 2019

Impact

- Second regional security workshop at APNIC46
- On-going engagement and support to the region
- CERTs established in Tonga, PNG, Vanuatu and Solomons

Funding – PNG CERT and Pacific LEA projects

- PNGCERT (equipment) – AUD 75,000
- Pacific LEA (training) – AUD 108,000
- Projects start next year

Funding - ISIF Asia

Received:

- 219 grant proposals from 28 economies (proposals for the first time from Laos, Macau, Taiwan and Hong Kong)

Allocated

- USD 210,000 allocated to 10 projects in nine economies.
Two awards and eight grants across four funding categories

Award Winners

Community Networks (ISOC)

Philippines: Community Cellular Networks

Gender Empowerment and Innovation (IDRC)

Myanmar: Tech Age Girls

Grant winners 1

Network Operations Research (APNIC)

1. Malaysia: Measuring and Detecting Network Interference in Southeast Asia.
2. Pakistan: Establishment of a Carrier Neutral Software-Defined Internet Exchange Point.

Community Networks (ISOC)

1. Indonesia: Community LTE in Papua.
2. Bhutan: Connecting the Unserved – Bhutan's First Trial with TV White Space Technology.

Grant winners 2

Cybersecurity (APNIC)

1. China: RPKI Monitor and Visualizer for Detecting and Alerting for RPKI Errors.
2. Malaysia: A novel graph analytics theory model to mitigate IoT botnets attacks for big data.

Gender Empowerment and Innovation (IDRC)

1. Sri Lanka: NextGen Girls – Internet Security Ambassadors Project.
2. Cambodia: Increasing the Safe Use of Internet by Women and Girls.

Funding (AUD)

Year	Donor	Project	Amount	Total
2018	TAF	PNG training, IXP and CERT	476,000*	
2018	DFAT	Pacific LEA training	108,000	
2018	DFAT	PNG CERT	75,000	
2018	DFAT	Pacific CERT (2 nd phase)	100,000	759,000
2017	DFAT	Pacific CERT (1st phase)	100,000	
2017	IDRC	ISIF Asia	103,000	
2017	ISOC	ISIF Asia	44,000	247,000
Total				1,006,000

* revised

New funding

- [Confidential material redacted]



Agenda Item 19

Financial report

APNIC

Portfolio Review



November 2018

Credit Suisse AG
Private Banking Australia

Confidential

CREDIT SUISSE 

Key Highlights – Market Commentary

Period Ending 30/09/2018 and October

- Australian equities rose 1.53% in the September quarter with the index reaching its highest level since the global financial crisis. Global markets were also supported as the MSCI World Index ex-Australia rose +7.44% in AUD terms with the US (+10.08%) and Europe (+3.02%) performing well. Escalating trade and political tensions drove weakness in the Emerging Markets late in the quarter, though the weaker AUD saw the region up +1.16% in AUD terms. The Bloomberg AUD Bond Index finished up 0.54% as yields were mixed across the curve, with mildly higher yields at the long end.
- October however experienced a sharp equity sell-off with the Australian market down -6.05% for the month, the US down -4.84%, Europe down -5.70%, Japan down -6.58% and Emerging Markets down -6.61%, all in AUD terms.
- **A combination of factors weighed on equity markets in October:**
 - **First and foremost, we saw yields in the US climb to highs last seen in 2011 which, when combined with the US Federal Reserve (the Fed) signalling a more hawkish stance, created fear that monetary tightening could create greater headwinds for the US economy.**
 - **Secondly, rhetoric surrounding the China-US trade war escalated, triggering concerns that the conflict could last longer than initially expected.**
 - **Third and finally, despite the US earnings season showing very good earnings growth above 20%, outlook-related statements from management were somewhat muted as the lower corporate tax rate becomes less of a year-on-year tailwind going forward and trade tensions begin to impact input costs.**
- Australian bonds returned 0.48% for October, a reflection of the income generated as well as a slight fall in bond yields. Gold meanwhile, rose 4.68%, reflecting a flight to safety in the face of volatility. **Despite the sell-off, we remain positive on the longer term outlook for equities.**
- The Australian economy grew 0.9% in 2Q18, bringing the year on year growth rate to 3.4%, the fastest rate seen since 2012. This was supported by a 0.7% increase in household consumption, albeit at the expense of a drop in the savings ratio. There were some tentative signs of wage growth with 2Q18 wage rates (excluding bonuses) increasing 0.6%. However, the Reserve Bank of Australia (RBA) is still unlikely to hike the cash rate in the near term given mild inflation pressure and a weakening housing market.

Key Highlights – Market Commentary (cont.)

Period Ending 30/09/2018 and October

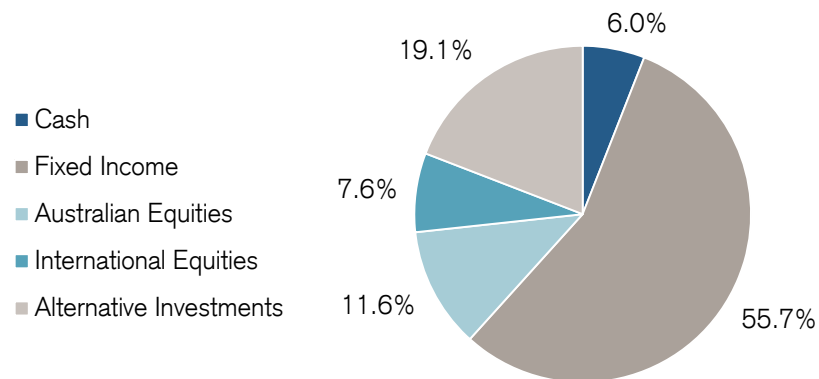
- US economic data continued to paint a rosy picture. 2Q18 Gross Domestic Product (GDP) growth was revised up from 4.1% to 4.2% on the back of improved imports and software spending. Consumer spending remained strong. The labour market also showed continued signs of improvement with the annual wage growth rate hitting a cycle high of 2.9% in August. Business demand appeared similarly robust with the Institute for Supply Management (ISM) Purchasing Managers' Index (PMI) for Manufacturing and Non-Manufacturing hovering around the 60.0 mark in September. In light of the healthy back drop, the fall in core inflation from 2.9% to 2.7% in August came as a surprise. However, **the Fed signalled continued confidence in the economy by hiking rates in September.**
- Economic indicators were broadly indicative of stabilising growth for the Euro area and perhaps even the glimmer of reacceleration. The GDP growth rate for 2Q18 clocked in at 0.4%, in line with 1Q18. The persistent steady state results from the counteracting forces of domestic and external demand. The former is robust with the Services PMI in September increasing to a three month high of 54.7 whilst the latter is weakening in the midst of intensifying global trade tensions and saw the manufacturing PMI fall from 54.6 to 53.2. On the bright side, employment growth was strong, hitting a six month high in August which should continue to counteract the weakness in exports. However, with consumer sentiment sliding again in September and the European Central Bank (ECB) poised to commence monetary policy normalisation, any deterioration in the Italian budget or Brexit negotiations could disrupt this delicate dynamic.
- Economic growth in China slowed in 2Q18 from 6.8% to 6.7% and subsequent data points have been mixed. There were tentative signs of activity improvement as industrial production increased to 6.1% Year on Year (YoY) in August, up from 6.0% YoY in July and nominal retail sales growth rose to 9.0% YoY, up from 8.8% YoY in July. However, the manufacturing sector has suffered as the US-China trade war intensified. The official and Caixin manufacturing PMIs continued their downward trends. In fact, the latter fell from 50.6 to 50.0 in September, marking the first time in over a year that the PMIs have moved out of expansionary territory. Nevertheless, **the Chinese government has an arsenal of tools which it has made clear it is prepared to use to protect against further weakness and stimulate growth.**

Asset Allocation

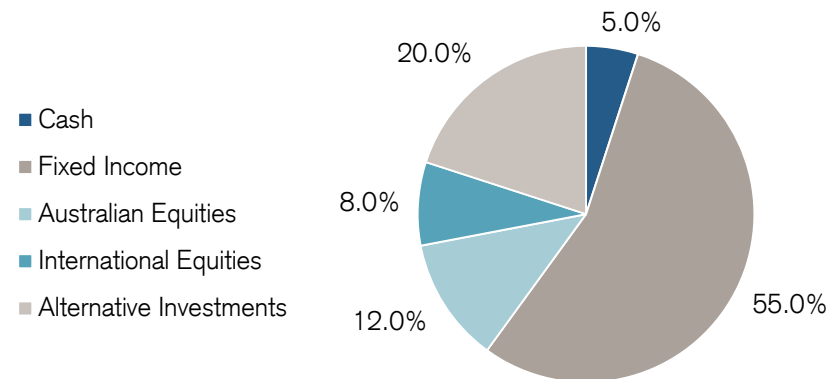
Period Ending 31/10/2018

- The portfolio finished the quarter in a defensive position, being overweight cash, overweight bonds, marginally underweight equities and marginally underweight alternatives.
- The positioning is a result of drift due to the October sell off. The overall Credit Suisse tactical asset allocation position targeted is positive *growth* (equities) and neutral fixed income, but given an increased level of uncertainty/volatility we are working to re-establish the positioning over a couple of weeks while keeping a close eye on markets and indicators of stress.
- In mid-November, we increased the allocation to emerging market equities.

Current Asset Allocation



Benchmark Asset Allocation



Performance Statistics

Period Ending 31/10/2018

Yield Strategy

Portfolio Value End October AUD 24,849,434

APNIC Portfolio	Portfolio ¹	Benchmark	Relative Performance	CPI + 2.5%
October	-1.09%	-1.24%	+0.15%	0.37%
3 Months to end October	-0.31%	-0.63%	+0.32%	1.12%
Calendar Year to end October	2.07%	1.87%	+0.20%	3.78%
One Year to end October	2.88%	2.98%	-0.10%	4.53%
3 Years p.a. to end October	3.56%	3.88%	-0.32%	4.27%
Since Inception ² p.a. to end October	4.82%	5.03%	-0.21%	4.43%

¹ Performance is after fees but before franking

² Inception September 2013

Outlook

As at 31/10/2018

- The October correction in equity markets was largely contained in the sense that other asset classes that typically respond to risk-off events weren't as impacted. For example, we would expect significant weakening of the AUD during severe market corrections. During the Global Financial Crisis, the AUD weakened more than 30% in a matter of months. In October however, the AUD weakened little more than 2%. In other words, the foreign exchange markets were indicating less pessimistic outcomes in relation to rising yields in the US, the trade war rhetoric and the US earnings season. The same was true for other risk-off indicators such as the Japanese Yen, spreads on high yield bonds and Credit Default Swap (CDS) spreads, which all behaved in a more composed manner. Gold was the one safe-haven that did increase during the month, however **when considering all reactions across the different asset classes, October's sell off appears to have been a contained correction as opposed to anything more sinister.**
- The insight provided by looking across asset classes, combined with the fact that economic fundamentals continue to look pretty solid (led by the US) and valuations are now more attractive post the sell down, means that **we continue to see value in equities over the medium term.**
- Given the sharpness in the selloff, we chose to allow the portfolio to drift into a more defensive position, and wait for greater stability in the market to re-establish our position. **The portfolio will slowly rebuild its equities position as markets become less volatile, though will continue to hold an allocation to defensive assets in this period, via high quality fixed income and gold to provide a balance against risk positions.**
- Our preferred allocation to Fixed Income remains neutral for the time being. Within equities, our regional preference is Emerging Markets, US and Japan are neutral, while we prefer being underweight Europe.

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Private Banking

Investment Report 1.10.2018 – 31.10.2018

APNIC PTY LTD

Portfolio: 3000039-70



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Private Banking

Investment Report 1.10.2018 – 31.10.2018

Portfolio **3000039-70**

In the Name of APNIC PTY LTD

Produced on 2.11.2018
Reporting Currency AUD

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Scope of Analysis
 as of 31.10.2018

Components	Portfolio	Asset Value in AUD	Discretionary Mandate	Opened	Closed	Performance Activation	Performance Deactivation
Investment related Positions							
AUD Portfolio	3000039-70	24,854,696	Yes	16.08.2013		31.12.2013	
Total Wealth		24,854,696					

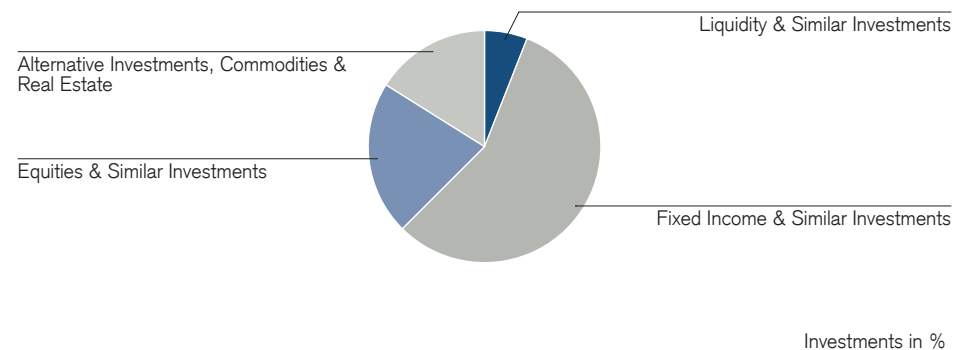
1. Overview

1.1. Asset Allocation

Asset Allocation by Asset Category

Period 1.10.2018 - 31.10.2018

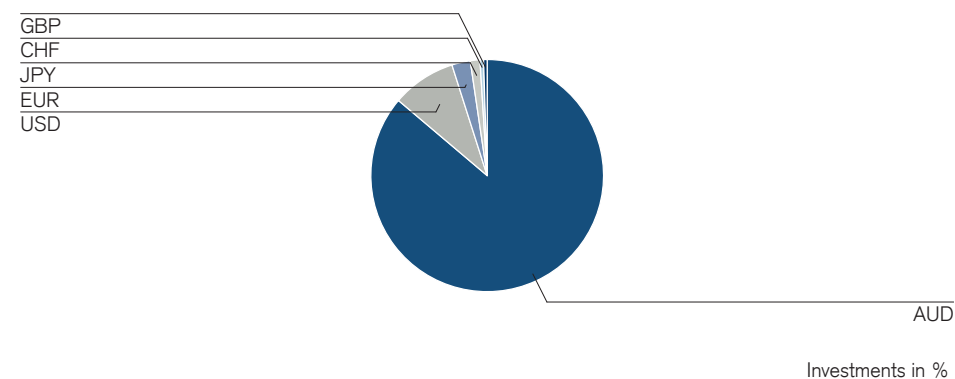
	Beginning Market Value in AUD	Change	Ending Market Value in AUD	Ending Market Value Prop.
■ Liquidity & Similar Investments	1,162,204	319,327	1,481,530	5.96%
■ Fixed Income & Similar Investments	14,040,297	10,282	14,050,579	56.53%
■ Equities & Similar Investments	5,637,455	-308,585	5,328,870	21.44%
■ Alternative Investments, Commodities & Real Estate	4,283,149	-289,431	3,993,717	16.07%
Total Investments	25,123,104		24,854,696	100.00%



Asset Allocation by Currency

Period 1.10.2018 - 31.10.2018

	Beginning Market Value in AUD	Change	Ending Market Value in AUD	Ending Market Value Prop.
■ AUD - Australian Dollar	21,687,949	-157,362	21,530,588	86.63%
■ USD - US Dollar	2,288,703	-63,379	2,225,324	8.95%
■ EUR - Euro	676,984	-34,954	642,029	2.58%
■ JPY - Japan Yen	343,474	-10,908	332,565	1.34%
■ CHF - Swiss Franc	66,195	-1,188	65,007	0.26%
■ GBP - Pound Sterling	59,799	-616	59,183	0.24%
Total Investments	25,123,104		24,854,696	100.00%



1.2. Income and Activity

Income Summary

Period 1.10.2018 - 31.10.2018

	Current Period in AUD	Year to Date in AUD
Cash Dividend	72,311	637,397
Coupon Received/Paid	0	0
Interest Earned/Paid	1,333	6,023
Net Income	73,644	643,420

Activity Summary

Period 1.10.2018 - 31.10.2018

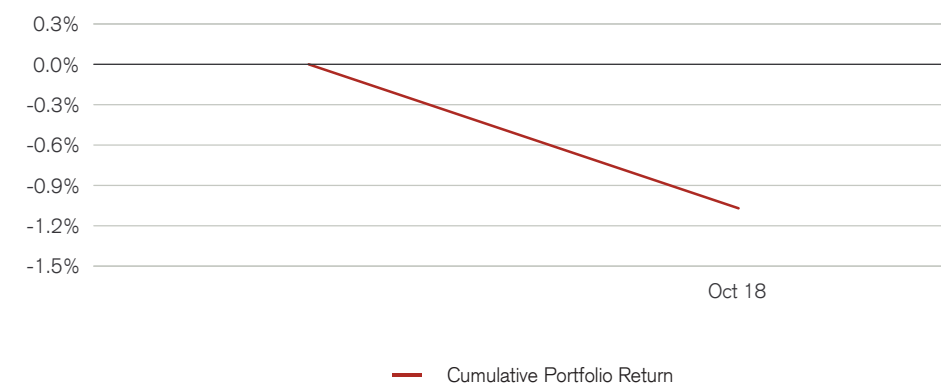
	Current Period in AUD	Year to Date in AUD
Asset Inflows	0	1,500,000
Asset Outflows	0	0
Net Investment Asset Flows	0	1,500,000
Net Non-Investment Flows	0	0

1.3. Performance

Performance Summary

Period 1.10.2018 - 31.10.2018

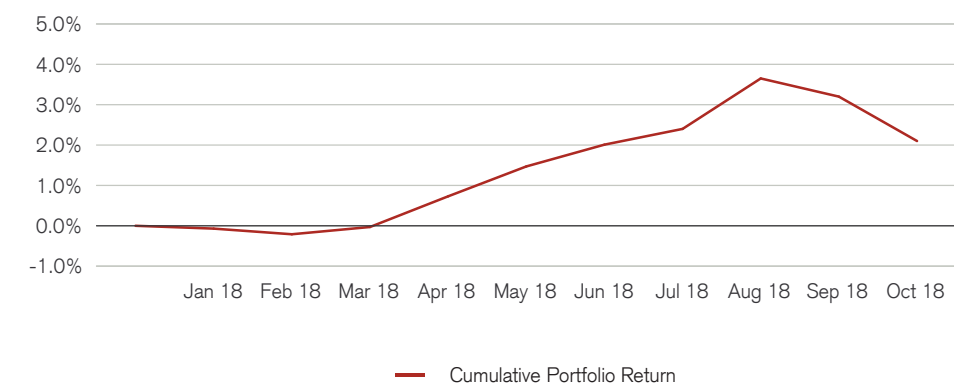
	Asset Value in AUD	Asset Value in AUD
Ending Market Value		24,854,696
Beginning Market Value		25,123,104
Asset Flows including		0
Inflows	0	
Outflows	0	
Net Non-Investment Flows	0	
Taxes	0	
Flow Adjusted Value Change		-268,408
Cumulative Portfolio Return – net		-1.07%



Performance Year-to-date

Period 1.1.2018 - 31.10.2018

	Asset Value in AUD	Asset Value in AUD
Ending Market Value		24,854,696
Beginning Market Value		22,894,610
Asset Flows including		1,490,445
Inflows	1,500,000	
Outflows	0	
Net Non-Investment Flows	0	
Taxes	-9,555	
Flow Adjusted Value Change		469,641
Cumulative Portfolio Return – net		2.10%



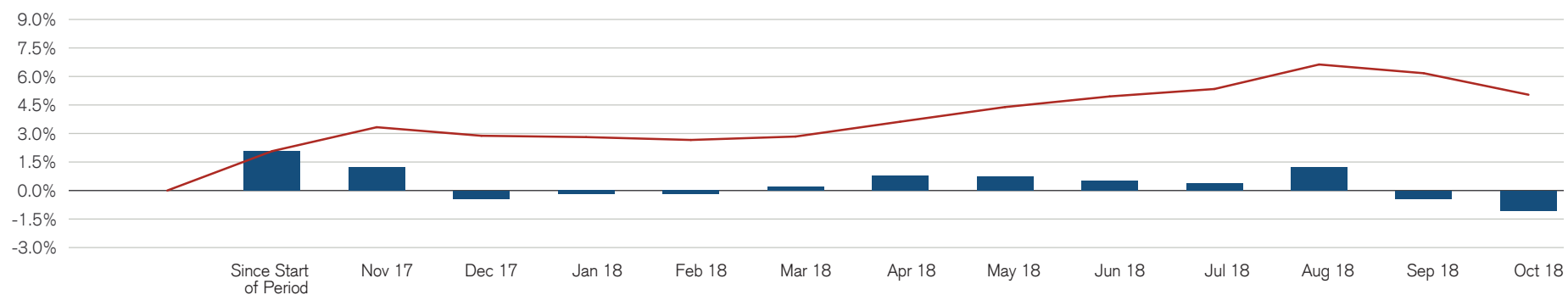
2. Analyses

2.1. Performance

Performance Details

Period 1.10.2017 - 31.10.2018

	Since Start of Period	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18
Ending Market Value	22,717,001	22,997,237	22,894,610	22,879,301	22,845,845	22,883,939	23,057,480	23,228,882	23,348,210	23,938,993	25,235,759	25,123,104	24,854,696
Beginning Market Value	22,257,046	22,717,001	22,997,237	22,894,610	22,879,301	22,845,845	22,883,939	23,057,480	23,228,882	23,348,210	23,938,993	25,235,759	25,123,104
Asset Flows including	0	0	-3,087	0	0	-3,121	0	0	-3,142	500,000	1,000,000	-3,293	0
Inflows	0	0	0	0	0	0	0	0	0	500,000	1,000,000	0	0
Outflows	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Non-Investment Flows	0	0	0	0	0	0	0	0	0	0	0	0	0
Taxes	0	0	-3,087	0	0	-3,121	0	0	-3,142	0	0	-3,293	0
Flow Adjusted Value Change	459,955	280,236	-99,539	-15,310	-33,455	41,214	173,541	171,403	122,470	90,782	296,766	-109,362	-268,408
■ Portfolio Return – net	2.07%	1.23%	-0.43%	-0.07%	-0.15%	0.18%	0.76%	0.74%	0.53%	0.38%	1.22%	-0.43%	-1.07%
— Cumulative Portfolio Return	2.07%	3.33%	2.88%	2.81%	2.66%	2.84%	3.62%	4.39%	4.95%	5.34%	6.63%	6.17%	5.04%



3. Positions

3.1. Investment Related Positions

as of 31.10.2018

Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
Liquidity & Similar Investments								
Accounts								
AUD	461,299.65	Current Account -20300003970945		1.0000		461,300		
						1.86%		
EUR	128,626.89	Current Account -20300003970056		1.0000		205,856	2,009	0.99%
				1.5848 EUR/AUD		0.83%	2,009	0.99%
GBP	33,008.07	Current Account -20300003970089		1.0000		59,183	-796	-1.33%
				1.8171 GBP/AUD		0.24%	-796	-1.33%
JPY	12,271,182	Current Account -20300003970335		1.0000		152,937	4,407	2.97%
				82.6175 AUD/JPY		0.62%	4,407	2.97%
USD	189,848.03	Current Account -20300003970780		1.0000		267,912	3,381	1.28%
				0.7177 AUD/USD		1.08%	3,381	1.28%
Total Accounts						1,147,188		
						0		
						4.62%		

Number/ Nominal	Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
Call & Time Deposits							
AUD	334,000	1.97% Deposit - Fixed Term (MM1828501059) 12.10.2018 - 02.11.2018 Total interest at maturity: AUD 378.56	1.0000		334,343 343 1.35%		
Total Call & Time Deposits					334,343 343 1.35%		
Total Liquidity & Similar Investments					1,481,530 343 5.96%		
Fixed Income & Similar Investments							
Fixed Income & Similar Investments AUD							
AUD	4,184,987.93	UNITS -D- ISHARES AUSTRALIAN BOND INDEX FUND	AU60BGL01056 2244170	1.0285	1.0340 NAV 31.10.2018	4,327,370 23,250 23,250 17.41%	0.54% 0.54%
AUD	220,674.9453	UNITS BENTHAM WHOLESALE SYNDICATED LOAN FUND	AU60CSA00468 3242662	1.0132	1.0246 NAV 30.10.2018	226,104 2,507 2,507 0.91%	1.12% 1.12%
AUD	674.326	UNITS PIMCO GLOBAL CREDIT FUND	AU60ETL01145 3432906	1,000.7455	980.2678 NAV 31.10.2018	661,020 -13,809 -13,809 2.66%	-2.05% -2.05%
AUD	1,726.041	UNITS PIMCO AUSTRALIAN BOND FUND CLASS -A-	AU60ETL01152 3432899	1,112.6376	1,124.1264 NAV 31.10.2018	1,940,288 19,830 19,830 7.81%	1.03% 1.03%
AUD	2,582,453.181	UNITS LEGG MASON WESTERN ASSET AUSTRALIAN BOND TRUST CLASS -A-	AU60SSB01221 2248336	1.2076	1.2265 BID 31.10.2018	3,167,379 48,798 48,798 12.74%	1.56% 1.56%

Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	3,320,051.92	UNITS VANGUARD AUSTRALIAN FIXED INTEREST INDEX FUND	AU60VAN00014 1653500	1.1291	1.1230 NAV 31.10.2018	3,728,418 15.00%	-20,226 -20,226	-0.54% -0.54%
Total Fixed Income & Similar Investments						14,050,579 0 56.53%		
Equities & Similar Investments								
Equities & Similar Investments AUD								
AUD	4,119	REGISTERED SHS AUSTRALIA & NEW ZEALAND BANKING GROUP LTD	AU000000ANZ3 640139 ANZ.AX	30.2318	25.9300 CLO 31.10.2018	106,806 0.43%	-17,719 -17,719	-14.23% -14.23%
AUD	7,715	REGISTERED SHS BHP BILLITON LTD	AU000000BHP4 640390 BHP.AX	28.5717	32.2100 CLO 31.10.2018	248,500 1.00%	28,070 28,070	12.73% 12.73%
AUD	1,337	REGISTERED SHS CARSALES.COM LTD	AU000000CAR3 10476764 CAR.AX	14.2157	12.2000 CLO 31.10.2018	16,311 0.07%	-2,695 -2,695	-14.18% -14.18%
AUD	2,300	REGISTERED SHS COMMONWEALTH BANK OF AUSTRALIA	AU000000CBA7 646758 CBA.AX	76.7781	69.2300 CLO 31.10.2018	159,229 0.64%	-17,361 -17,361	-9.83% -9.83%
AUD	296	REGISTERED SHS CIMIC GROUP LTD	AU000000CIM7 27620160 CIM.AX	47.6934	47.2900 CLO 31.10.2018	13,998 0.06%	-119 -119	-0.85% -0.85%
AUD	3,952	REGISTERED SHS COMPUTERSHARE LTD	AU000000CPU5 241285 CPU.AX	16.8102	19.7700 CLO 31.10.2018	78,131 0.31%	11,697 11,697	17.61% 17.61%

Number/ Nominal	Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	1,324 REGISTERED SHS CSL LTD	AU000000CSL8 241548 CSL.AX	104.9787	188.0000 CLO 31.10.2018	248,912 1.00%	109,920 109,920	79.08% 79.08%
AUD	6,840 REGISTERED SHS EVOLUTION MINING LTD	AU000000EVN4 14241033 EVN.AX	2.4387	2.9800 CLO 31.10.2018	20,383 0.08%	3,702 3,702	22.19% 22.19%
AUD	3,750 REGISTERED SHS FORTESCUE METALS GROUP LTD	AU000000FMG4 1655130 FMG.AX	5.0451	4.0000 CLO 31.10.2018	15,000 0.06%	-3,919 -3,919	-20.72% -20.72%
AUD	7,612 UNITS ISHARES CORE S&P/ASX 200 ETF EXCHANGE TRADED FUND	AU000000IOZ4 12101500 IOZ.AX	24.5050	23.8100 CLO 31.10.2018	181,242 0.73%	-5,291 -5,291	-2.84% -2.84%
AUD	2,352 CHESS UNITS OF FOREIGN SECURITIES JAMES HARDIE INDUSTRIES PLC	AU000000JHX1 1303670 JHX.AX	21.4806	18.7900 CLO 31.10.2018	44,194 0.18%	-6,328 -6,328	-12.53% -12.53%
AUD	1,129 REGISTERED SHS MAGELLAN FINANCIAL GROUP LTD	AU000000MFG4 2807450 MFG.AX	24.2684	26.6400 CLO 31.10.2018	30,077 0.12%	2,678 2,678	9.77% 9.77%
AUD	1,136 REGISTERED SHS MACQUARIE GROUP LTD	AU000000MQG1 3422370 MQG.AX	67.5244	117.2000 CLO 31.10.2018	133,139 0.54%	56,431 56,431	73.57% 73.57%
AUD	5,172 REGISTERED SHS NATIONAL AUSTRALIA BANK LTD	AU000000NAB4 641643 NAB.AX	31.2395	25.2100 CLO 31.10.2018	130,386 0.52%	-31,185 -31,185	-19.30% -19.30%

Number/ Nominal	Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	935 REGISTERED SHS NEWCREST MINING LTD	AU000000NCM7 650853 NCM.AX	22.6903	20.6100 CLO 31.10.2018	19,270 0.08%	-1,945 -1,945	-9.17% -9.17%
AUD	14,855 REGISTERED SHS ORORA LTD	AU000000ORA8 22750502 ORA.AX	2.9789	3.3600 CLO 31.10.2018	49,913 0.20%	5,661 5,661	12.79% 12.79%
AUD	8,324 REGISTERED SHS ORIGIN ENERGY LTD	AU000000ORG5 1051439 ORG.AX	8.7251	7.2900 CLO 31.10.2018	60,682 0.24%	-11,946 -11,946	-16.45% -16.45%
AUD	9,139 REGISTERED SHS QANTAS AIRWAYS LTD	AU000000QAN2 390413 QAN.AX	6.5061	5.4700 CLO 31.10.2018	49,990 0.20%	-9,469 -9,469	-15.93% -15.93%
AUD	1,479 REGISTERED SHS RIO TINTO LTD	AU000000RIO1 603520 RIO.AX	66.4031	76.4000 CLO 31.10.2018	112,996 0.45%	14,785 14,785	15.05% 15.05%
AUD	1,912 SHS RESMED INC CHESS DEPOSITORY INTERESTS REPR 1/10 SH	AU000000RMD6 1058638 RMD.AX	11.2948	14.8000 CLO 31.10.2018	28,298 0.11%	6,702 6,702	31.03% 31.03%
AUD	31,678 UNITS SPDR S&P/ASX 200 LISTED PROPERTY FUND EXCHANGE TRADED FUND	AU000000SLF1 1377855 SLF.AX	11.8800	12.3000 CLO 31.10.2018	389,639 1.57%	13,304 13,304	3.54% 3.54%
AUD	4,592 UNITS SPDR S&P/ASX 200 FUND ETF AUSTRALIAN EQUITY EXCHANGE TRADED FUNDS	AU000000STW9 1285707 STW.AX	56.1148	54.4800 CLO 31.10.2018	250,172 1.01%	-7,507 -7,507	-2.91% -2.91%

Number/ Nominal	Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	2,085	REGISTERED SHS SUNCORP GROUP LTD	AU000000SUN6 588679 SUN.AX	13.7982	14.0100 CLO 31.10.2018	29,211 442 0.12%	1.53% 1.53%
AUD	6,514	STAPLED SECURITY TRANSURBAN GROUP	AU000000TCL6 444655 TCL.AX	10.6423	11.3400 CLO 31.10.2018	73,869 4,545 0.30%	6.56% 6.56%
AUD	10,873	REGISTERED SHS TELSTRA CORPORATION LTD	AU000000TLS2 720464 TLS.AX	4.9151	3.0800 CLO 31.10.2018	33,489 -19,953 0.13%	-37.34% -37.34%
AUD	5,364	REGISTERED SHS WESTPAC BANKING CORP	AU000000WBC1 642372 WBC.AX	32.2837	26.8500 CLO 31.10.2018	144,023 -29,147 0.58%	-16.83% -16.83%
AUD	1,533	REGISTERED SHS WESFARMERS LTD	AU000000WES1 642397 WES.AX	43.7997	46.6200 CLO 31.10.2018	71,468 4,324 0.29%	6.44% 6.44%
AUD	1,902	REGISTERED SHS WOOLWORTHS GROUP LTD	AU000000WOW2 81350 WOW.AX	29.0883	28.4300 CLO 31.10.2018	54,074 -1,252 0.22%	-2.26% -2.26%
AUD	2,257	REGISTERED SHS WOODSIDE PETROLEUM LTD	AU000000WPL2 642429 WPL.AX	35.2145	34.8500 CLO 31.10.2018	78,656 -823 0.32%	-1.04% -1.04%
AUD	56,005	UNITS BLACKROCK CONCENTRATED INDUSTRIAL SHARE FUND CLASS -D-	AU60BLK00126 34230296	1.2786	1.0983 NAV 26.10.2018	61,510 -10,097 0.25%	-14.10% -14.10%
AUD	47,580.91	UNITS ELEY GRIFFITHS GROUP SMALL COMPANIES FUND	AU60EGG00011 3222428	2.1142	2.1601 NAV 31.10.2018	102,780 2,183 0.41%	2.17% 2.17%

Number/ Nominal	Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	0	UNITS ABERDEEN STANDARD EMERGING OPPORTUNITIES FUND	AU60ETL00329 2220820	2.0907 NAV 30.10.2018			
AUD	123,225.67	UNITS PARTNERS GROUP GLOBAL VALUE FUND (AUD) WHOLESALE	AU60ETL02762 26607292	1.8783 2.0956 NAV 28.09.2018	258,232 1.04%	26,775 26,775	11.57% 11.57%
AUD	21,767.1893	UNITS IRONBARK KARARA AUSTRALIAN SMALL COMPANIES FUND CLASS -A-	AU60PAT00021 2879000	3.0252 3.4989 NAV 31.10.2018	76,161 0.31%	10,312 10,312	15.66% 15.66%
AUD	5,382	REGISTERED SHS OIL SEARCH LTD	PG0008579883 809900 OSH.AX	8.5718 7.7700 CLO 31.10.2018	41,818 0.17%	-4,315 -4,315	-9.35% -9.35%
Total Equities & Similar Investments AUD					3,412,560 0 13.73%		
Equities & Similar Investments CHF							
CHF	495	UNITS -A- ISHARES ETF (CH) - ISHARES SMI(R) ETF (CH)	CH0008899764 889976 CSSMI.S	91.5160 0.7354 AUD/CHF 31.10.2018	65,007 0.26%	3,408 1,420 1,988	5.53% 2.23% 3.30%
Total Equities & Similar Investments CHF					65,007 0 0.26%		
Equities & Similar Investments EUR							
EUR	5,628	SHS EUR ISHARES II PLC - ISHARES MSCI EUROPE UCITS ETF EUR (DIST)	IE00B1YZSC51 3246398 IQQY.DE	23.7689 1.5037 EUR/AUD 31.10.2018	204,281 0.82%	3,134 -9,808 12,942	1.56% -4.58% 6.14%

Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
EUR	9,305	ACCUM.PTG.SHS WELLINGTON MANAGEMENT FUNDS (IRELAND) PLC - WELLINGTON STRATEGIC EUROPEAN EQUITY FUND CLASS -N- UNHEDGED EUR	IE00B9DPD161 20938626	13.8471 1.4731 EUR/AUD	15.5718 NAV 31.10.2018	231,892 0.93%	42,088 25,684 16,404	22.17% 12.46% 9.72%
Total Equities & Similar Investments EUR						436,174 0 1.75%		
Equities & Similar Investments JPY								
JPY	640	UNITS NIKKEI 225 EXCHANGE TRADED FUND	JP3027650005 1264151 1321.T	18,961.5313 87.7787 AUD/JPY	22,520.0000 CLO 31.10.2018	179,628 0.72%	41,379 28,384 12,995	29.93% 18.77% 11.16%
Total Equities & Similar Investments JPY						179,628 0 0.72%		
Equities & Similar Investments USD								
USD	248	ACCUM.PTG.SHS ISHARES VII PLC - ISHARES NASDAQ 100 UCITS ETF USD	IE00B53SZB19 10737617 CSNDX.S	202.2470 0.8873 AUD/USD	386.8500 CLO 31.10.2018	135,388 0.54%	78,860 64,607 14,254	139.51% 91.28% 48.23%
USD	190	SHS -IP- RAM (LUX) SYSTEMATIC FUNDS SICAV - EMERGING MARKETS EQUITIES CAPITALISATION	LU0704154458 14219625	149.4364 0.7594 AUD/USD	164.1800 NAV 30.10.2018	44,021 0.18%	6,631 3,953 2,678	17.73% 9.87% 7.87%
USD	4,584	SHS -R (ACC.)- GOLDMAN SACHS FUNDS SICAV - GOLDMAN SACHS EMERGING MARKETS EQUITY PORTFOLIO CAPITALISATION	LU0830622741 19578737	13.5800 0.7346 AUD/USD	11.8900 NAV 31.10.2018	76,915 0.31%	-7,831 -10,932 3,101	-9.24% -12.44% 3.20%

Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
USD	27,872	SHS -UCITS ETF USD C- AMUNDI INDEX SOLUTIONS SICAV - AMUNDI MSCI EMERGING MARKETS CAPITALISATION	LU1681045453 38785088 AUEM.PA	5.3202 0.7975 AUD/USD	4.1718 CLO 31.10.2018	164,089 0.66%	-21,837 -45,169 23,332	-11.75% -21.59% 9.84%
USD	1,160	SHS ISHARES GLOBAL HEALTHCARE ETF	US4642873255 1352444 IXJ.P	47.5979 0.8872 AUD/USD	59.0300 CLO 31.10.2018	96,631 0.39%	34,401 18,714 15,687	55.28% 24.02% 31.26%
USD	1,536	TRUST UNITS SPDR S&P 500 ETF TRUST	US78462F1030 45088 SPY.P	200.2251 0.8427 AUD/USD	270.6300 CLO 31.10.2018	586,616 2.36%	221,673 152,609 69,064	60.74% 35.16% 25.58%
USD	3,555	SHS FINANCIAL SELECT SECTOR SPDR FUND	US81369Y6059 986018 XLF.P	27.6740 0.7728 AUD/USD	26.2800 CLO 31.10.2018	131,841 0.53%	4,538 -6,993 11,531	3.56% -5.04% 8.60%
Total Equities & Similar Investments USD						1,235,501 0 4.97%		
Total Equities & Similar Investments						5,328,870 0 21.44%		
Alternative Investments, Commodities & Real Estate								
Hedge Funds								
AUD	504,584.378	UNITS GMO SYSTEMATIC GLOBAL MACRO TRUST CLASS -B-	AU60GMO00067 3375604	1.0077	0.9651 NAV 30.10.2018	486,974 1.96%	-21,490 -21,490	-4.23% -4.23%
AUD	321,265.67	UNITS BLACKROCK GLOBAL ALLOCATION FUND (AUST) CLASS -D- WHOLESALE	AU60MAL00181 3379478	1.2406	1.1747 NAV 31.10.2018	377,378 1.52%	-21,178 -21,178	-5.31% -5.31%

Number/ Nominal	Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	175,161	RED.PTG.SHS -A1- AHL (CAYMAN) SPC AUD CLASS A EVOLUTION SEGREGATED PORTFOLIO	KYG012291145 22393979	1.1382	1.8297 NAV 30.09.2018	320,492 1.29%	121,122 121,122 60.75% 60.75%
AUD	336,454.813	RED.PTG.SHS -A- AHL DIMENSION (CAYMAN) LIMITED AUD	KYG0132G1652 30773689	0.9991	1.0472 NAV 30.09.2018	352,335 1.42%	16,174 16,174 4.81% 4.81%
Total Hedge Funds					1,537,180 0 6.18%		
Commodities & Precious Metals							
AUD	3,833	ETC SECURITY ETFS METAL SECURITIES AUSTRALIA LTD 2003-WITHOUT FIXED MATURITY ON GOLD COMMODITY	AU00000GOLD7 1583458 GOLD.AX	148.6351	161.9800 CLO 31.10.2018	620,869 2.50%	51,151 51,151 8.98% 8.98%
USD	580	UBS ETC UBS AG, LONDON BRANCH 2007- OPEN END ON UBS BLOOMBER CMCI COMPOSITE TOTAL RETURN	CH0031794263 3179426 TCMCI.S	1,008.3991 0.8355 AUD/USD	882.0000 BID 31.10.2018	721,910 2.90%	21,846 -103,457 125,303 3.12% -12.53% 15.66%
Total Commodities & Precious Metals					1,342,780 0 5.40%		
Real Estate							
AUD	12,057	STAPLED SECURITY DEXUS	AU000000DXS1 3819970 DXS.AX	10.1661	10.2000 CLO 31.10.2018	122,981 0.49%	408 408 0.33% 0.33%
AUD	23,808	STAPLED SECURITY GOODMAN GROUP	AU000000GMG2 18079202 GMG.AX	8.8381	10.3800 CLO 31.10.2018	247,127 0.99%	36,710 36,710 17.45% 17.45%

Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	95,000	STAPLED SECURITY MIRVAC GROUP	AU000000MGR9 821911 MGR.AX	1.8439	2.1700 CLO 31.10.2018	206,150 0.83%	30,983 30,983	17.69% 17.69%
AUD	23,003	STAPLED SECURITY SCENTRE GROUP	AU000000SCG8 23931192 SCG.AX	3.4593	3.9800 CLO 31.10.2018	91,552 0.37%	11,977 11,977	15.05% 15.05%
AUD	2,163	STAPLED SECURITY STOCKLAND	AU000000SGP0 642077 SGP.AX	4.5725	3.6100 CLO 31.10.2018	7,808 0.03%	-2,082 -2,082	-21.05% -21.05%
Total Real Estate						675,619 0 2.72%		
Other Alternative Investments								
AUD	4,309	PTG.SHS LEGG MASON GLOBAL FUNDS PLC - LEGG MASON WESTERN ASSET MACRO OPPORTUNITIES BOND FUND PREMIER CLASS DISTRIBUTING (S) HEDGED AUD	IE00BYOZZ17 28828240	101.7099	101.6800 NAV 31.10.2018	438,139 1.76%	-129 -129	-0.03% -0.03%
Total Other Alternative Investments						438,139 0 1.76%		
Total Alternative Investments, Commodities & Real Estate						3,993,717 0 16.07%		
Total Investments						24,854,696 100.00%		
of which Accrued Interest						343		

4. Appendix

4.1. Explanations

Accrued Interest

Accrued interest is not displayed for financial instruments with variable interest rate or frequency within the same interest period, except for Floating Rate Notes. For FINER Revexus, the accrued interest displayed is based on the deposit currency for reference purpose only. Entitlement to the accrued interest depends on the product features. All accrued interests are displayed in the reporting currency of the portfolio and are calculated recognizing trades end of day. The FX conversion rates (reflected below) are used to convert the amount from original currency to reporting currency. The accrued interest payable/receivable is displayed as the net amount on Current Account balances. As a result of the foregoing and other factors, the accrued interest is only an estimate and may not reflect the actual interest accrued, if any.

Activity Summary

The asset inflows and outflows include client-instructed transactions, which are aggregated as Net Investment Asset Flows. Non-Investment Flows refer to transactions related to Non-Investment Related Positions such as loan transactions to finance such Non-Investment Related Positions. Non-investment Flows do not contribute to the performance of the account. Such asset inflows and outflows do not include fees and taxes.

Analyses

Values displayed for the respective month labels are as of month-end dates. If the report end period is not a month-end, the report period end month label will show the values as of the report period end date.

Asset Classification

If an instrument is classified as 'not classifiable', the instrument is pending its proper classification. As soon this is available in the system, the instrument will reflect the correct classification.

Cost Valuation Exchange Rates

For the Positions section, the cost valuation exchange rate displayed is always the instrument currency against the portfolio currency.

For the Transactions section, the cost valuation exchange rate displayed is always between the instrument currency and reporting currency. For execution of FX purchase/sale transactions, the transaction valuation is based on the end of day exchange rate on the value date and the cost valuation is based on the FX contract rate.

Duration

Modified duration is a change in the price of a bond arising from a change in market yields. Modified duration is expressed as an approximate percentage. The investment report displays the Modified Duration method for all Fixed Income instruments.

Fees/ Taxes

Fees include management or safekeeping fees.

Taxes include value-added taxes and service related taxes, depending on country specific rules.

Income Summary

Coupon received and coupon paid, as well as interest earned and interest paid, does not include accrued or unpaid coupon or interest.

Year to date figures include the addition of the monthly figures inclusive of any backdated income processing/ adjustments.

Figures shown can be gross or net depending on the specific country and market practice.

Non-Investment related Income is included in the Income Summary.

Market Value

The values stated as begin of period are asset values as of the last reported statement period.

The values stated as beginning/ ending market values are asset values that are inclusive of most updated market prices and backdated transactions.

Non-Investment Related Positions

Non-Investment Related Positions refer to positions held in the form of insurance policies, guarantees (standby letters of credit/bank guarantees/holdcovers) or mortgages,.

Non-Investment Related Positions are displayed in the Scope of Analysis and in the Non-Investment Related Positions section. However, they are not included in any other analyses.

Performance Calculation

The performance figures are calculated based on investment related positions using the TWR Daily method (Time Weighted Rate of Return), which is based on geometrically linking daily rates of return.

The start of period displayed for the performance calculation is referring to Beginning Market Value, which is the closing balance of the previous day. The end of period displayed is referring to Ending Market Value, which is the closing balance of the day.

The net of fees and gross of taxes return is calculated after deduction of fees and before deduction of taxes.

The cumulative return calculation is reset, every time when geometrically linking the rates of return would render distorted values. Such scenarios can happen when the market values fluctuate around zero.

Return values prior 2015 displayed in this report might be different from previously reported return values.

Profit/ Loss Calculation

Realized and unrealized profit and loss are calculated by comparing the market or transaction value with the average cost value. For every trade date the system computes the average cost, first processing investments before disinvestments. Transaction costs are included in both realized and unrealized profit/loss calculation.

Unrealized profit/ loss displayed in the Positions section are calculated as of the reporting date. FX conversion rates used in the computation of the unrealized profit/loss is the derived rate based on the average price as of the individual transaction date.

Rating

Rating refers to the rating of an investment product and is either based on information available to the Bank or is obtained from sources believed to be reliable by the Bank as of the investment report date.

Yield

The investment report displays Yield for all Fixed Income instruments and is displayed per market price.

Abbreviations

BID = Bid Price
 CLO = Closing Price
 NAV = Net Asset Value

Rounding logic

Values in this investment report are calculated with exact numbers, however when presenting the data, values are rounded and therefore minor rounding differences might occur.

Large Numbers

The figures are consolidated and shown in denominations of thousands, millions and billions where applicable. If a value is too long to be displayed in the report itself, e.g. 1,526,555,333.26 the figure is consolidated and displayed as 1,526,555.33 in thousands in the report. If the value exceeds the column limit, a further division will take place and the phrase in millions/in billions will be displayed.

Conversion Rates as of 31.10.2018

AUD 1.0000 = CHF 0.7124
 AUD 1.0000 = JPY 80.2368
 AUD 1.0000 = USD 0.7086

EUR 1.0000 = AUD 1.6004
 GBP 1.0000 = AUD 1.7930

4.2. Legal Information

According to the Account Opening Terms and Conditions, this investment report shall be conclusive and binding if the Bank does not receive your objection in writing to any matters contained in this investment report within 14 days from the issue date.

Deposits with Credit Suisse are not subject to Division 2 of the Banking Act - Protection of Depositors.

If your account is booked with Credit Suisse AG, Sydney Branch or if your Relationship Manager (RM) or Investment Consultant is located in Australia, please refer to the Important Notice on Sales Disclosure to Investors for sales related information including information on monetary benefits received by the Bank where it distributes an investment product to you.

The Bank provides price indications for financial derivatives transactions, structured products and non-listed financial instruments based upon available market reference prices believed to be reliable. The Bank does not make any representation as to the accuracy or completeness of price indications for transactions nor the guarantee to buy/sell at the price indicated. The Bank does not accept liability for any loss arising from the client's use of, or reliance on, such price indications. The price indications of the initial purchase price may be different from the actual purchase price.

In the absence of reliable market reference prices, the Bank may assign a nominal value or make an appropriate comment on your investment report. As a result, the investment report may contain price indications or comments as the Bank sees appropriate in the prevailing circumstances. If you have any queries in this respect, please contact your Relationship Manager.

The Bank will, at the time of printing this investment report, use the last price indications available to it. Due to the time differences between the Asia Pacific region and markets in other regions, the price indications reflected in the Bank's investment report will not always reflect the price indications available on the last business day of the month in certain markets.

The Bank may use either an onshore or offshore CNY rate for FX conversion to reporting currency depending on the asset. Please note that there may be a differential between the onshore and offshore rate. Please refer to your RM if you need further information on the FX conversion rate applied in relation to your CNY positions.

The information in this investment report does not constitute legal or tax advice. You should consult your legal and/or tax experts if you need any such advice. The investment report does not take tax rules and regulations into consideration, and thus it cannot be used for tax reporting purposes.

This investment report is an electronically generated report and does not require a signature.

Finance Presentation APNIC EC Meeting

EC Retreat – December 2018

Finance Presentation

- Financial Performance - YTD Oct 2018
- New accounting standards

Financial Performance

Year to date October 2018

Financial Highlights YTD Oct 2018

- Equity Position increased by 6% to date in 2018 ✓
- Revenue tracking \$215k above budget ✓
- Expenses tracking \$810k below budget ✓
- Surplus forecast at \$909k, \$662k above budget ✓
- Net Cash Flow + \$523K to date in 2018 ✓
- Activity expenditure in line with budget estimates ✓
- New Member Growth close to budget assumptions ✓

Statement of Financial Position

	31/10/2018	Year End 2017	Change	% Change
ASSETS				
Total Current Assets	10,792,726	9,905,236	887,489	9%
Total Non-Current Assets	32,447,772	30,841,683	1,606,088	5%
TOTAL ASSETS	43,240,497	40,746,920	2,493,577	6%
LIABILITIES				
Total Current Liabilities	13,196,709	12,253,734	942,976	8%
Total Non-Current Liabilities	676,674	785,173	-108,499	-14%
TOTAL LIABILITIES	13,873,384	13,038,907	834,477	6%
NET ASSETS/ TOTAL EQUITY	29,367,114	27,708,013	1,659,101	6%

All amounts in AUD – Australian Dollars

Statement of Financial Position

Net Equity position has increased by 6% (\$1,659k) to 31 October 2018

- Current Assets increased by 9% \$887k
 - Increase in cash by \$523k
 - Membership renewals effect on receivables increased by \$73k
 - Interest receivable has increased by \$43k
 - Expenses incurred for NRO to be recovered increased by \$300k
 - Prepayment of deferred expenses and taxes increased by \$81k
 - Deposits have increased by \$60k
- Non-Current Assets increased by 5% \$1,606k
 - Reduction in Property & Equipment of \$355k
 - Investment portfolio increased by \$1,961k
 - \$500k transfer in July from Operating account
 - \$1M transfer in September

All amounts in AUD – Australian Dollars

Statement of Financial Position

- Current Liabilities increased by 8% \$943k
 - Staff Leave Provisions increased by \$372k
 - Accounts Payable increased by \$64k
 - Members Prepaid fees increased by \$505k
- Non-Current Liabilities decreased by 14% \$108k
 - Long Service Leave Provisions decreased by \$108k

All amounts in AUD – Australian Dollars

Statement of Financial Position

The equity position has increased by 6% \$1,659k, until the end of October 2018

- YTD October surplus contributes \$1,736k
- Change in Investment value at the end of October -\$77k

Financial Stability Measure

Analysis of Reserves				
	YTD 2018	2017	2016	2015
Total Equity	\$29,367,114	\$27,708,013	\$25,647,507	\$23,319,460
% Equity covered by Cash/ Cash Equivalents	113.1%	111.0%	110.6%	121.6%
Forecast/ Actual Daily Operating Expenses	\$58,619	\$53,909	\$49,430	\$46,077
Number of Months of expenses covered by Equity	16.47	16.90	17.01	16.64

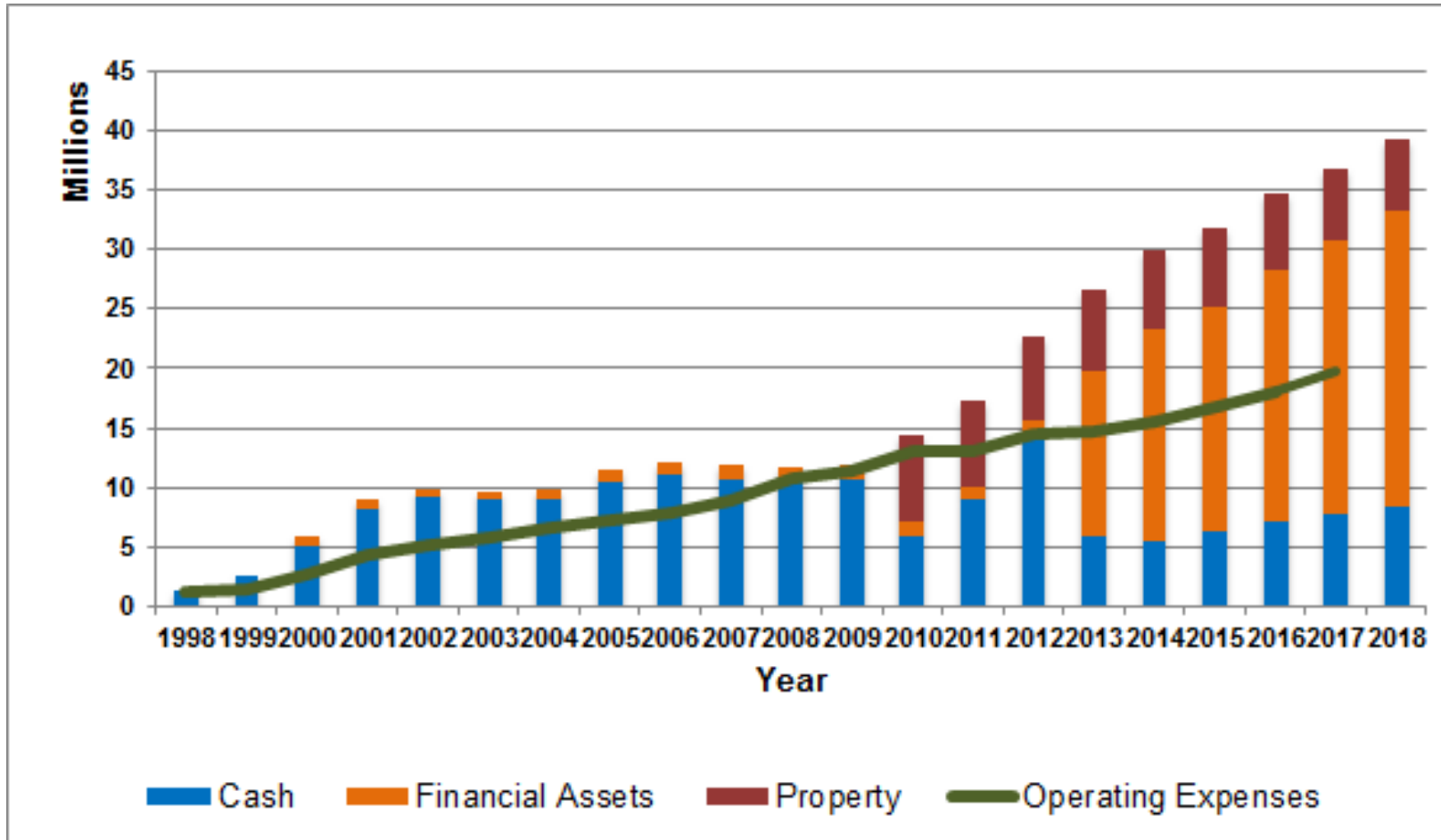


Target of 18 Months

- Based on Budget expenses
- Expected to improve over the year

All amounts in AUD – Australian Dollars

APNIC Capital Reserve



All amounts in AUD – Australian Dollars

Operating Surplus

	YTD Actual Oct 2018	YTD Actual Oct 2017	Variance %	Budget 2018	Forecast 2018	Budget Variance %
TOTAL REVENUE	18,659,637	17,589,490	6%	22,164,017	22,305,115	1%
TOTAL EXPENSES	16,923,551	15,867,032	7%	21,917,453	21,395,806	-2%
OPERATING SURPLUS/(DEFICIT)	1,736,087	1,722,457	1%	246,564	909,309	269%

All amounts in AUD – Australian Dollars

Statement of Income - Revenue

	YTD Actual Oct 2018	YTD Actual Oct 2017	Variance %	Budget 2018	Forecast 2018	Budget Variance %
Investment income	799,866	706,223	13%	960,000	870,000	-9%
Membership fees	16,781,065	16,029,538	5%	20,182,202	20,208,000	0%
Non-members fees	208,683	219,498	-5%	237,315	253,115	7%
Reactivation fees	21,000	20,700	1%	23,500	24,000	2%
Sign-Up fees	282,000	314,750	-10%	378,000	331,000	-12%
Transfer fees	141,606	99,869	42%	130,000	165,000	27%
Sundry income	425,418	198,912	114%	253,000	454,000	79%
TOTAL REVENUE	18,659,637	17,589,490	6%	22,164,017	22,305,115	1%

All amounts in AUD – Australian Dollars

Statement of Income - Revenue

Revenue tracking \$215k above budget

- Investment income in line with budget
- Membership Fees \$25k above budget
 - New Member growth continues below budget estimates
 - 686 Actual vs 700 Budget to October 31
 - Offset by reduction in account closures
 - 173 Actual vs 260 Budget to July 31
 - Impacting on Sign-Up fees \$33k below budget
 - 7 Reactivations
 - Around 30% of new Members from LDC's compared to Budget 20%
- Transfers above budget by \$33k
- Sundry income above budget by \$177k
 - Sponsorship Fees
 - Training and workshop registration fees
 - Local organiser contributing to training/ technical assistance
 - The provision of consulting services

Investment Fund Update

Market Value as at 31 October 2018

	Market Value
APNIC Portfolio	A\$24,849,434

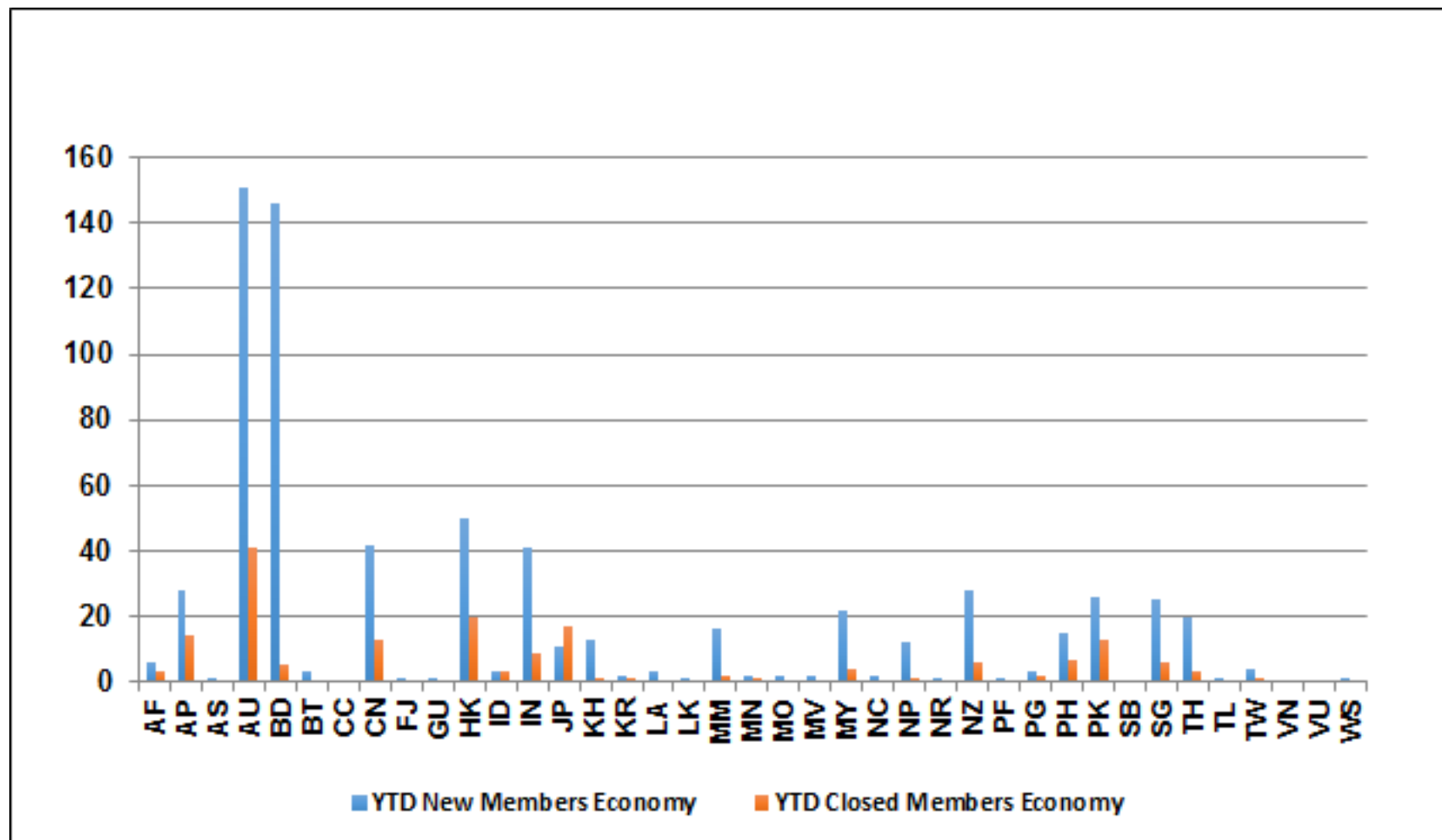
Performances as of 31 October 2018

	APNIC Portfolio			
	Portfolio	Benchmark	Relative	CPI + 2.5%
Month	-1.09%	-1.24%	+0.15%	0.37%
3 Months	-0.31%	-0.63%	+0.32%	1.12%
Year To Date	2.07%	1.87%	+0.20%	3.78%
1 Year	2.88%	2.98%	-0.10%	4.53%
3 Years pa	3.56%	3.88%	-0.32%	4.27%
Since Inception pa	4.82%	5.03%	-0.21%	4.43%

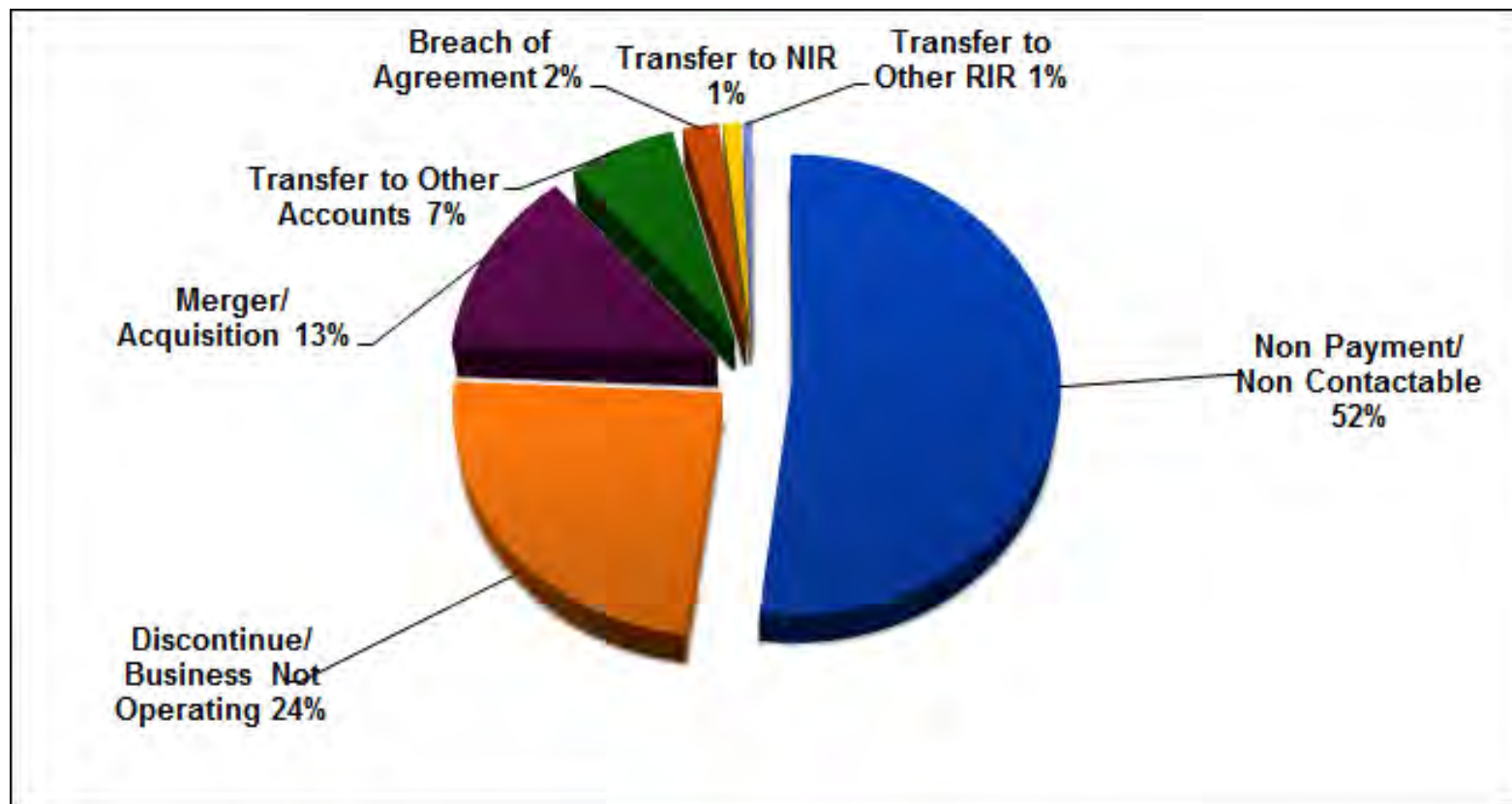
Membership Tracking

Membership	Total Dec 2017	YTD New Oct 2018	YTD Reactivate Oct 2018	YTD (Closed) Oct 2018	YTD Size Change Oct 2018	Total Oct 2018	% Total
Extra Large	23	0	0	0	0	23	0%
Very Large	41	0	0	0	3	44	1%
Large	138	1	0	-2	3	140	2%
Medium	473	5	0	-6	13	485	7%
Small	2,971	275	4	-71	119	3,298	44%
Very Small	2,769	383	3	-64	-140	2,951	43%
Associate	132	22	0	-30	2	126	2%
TOTAL	6,547	686	7	-173	0	7,067	100%

Membership Growth



Reason for account closure



Membership Tracking – Closures by Economy

Economy	Breach of Agreement	Discontinued/ Business Not Operating	Merger/ Acquisition	Non Payment/ Non Contactable	Transfer to NIR	Transfer to Other Accounts	Transfer to Other RIR	Grand Total	IPv4 Resources Reclaimed (/24's)	IPv6 Resources Reclaimed (/48's)	ASN Reclaimed
AF				3				3	9	65537	3
AP		3	3	6		2		14	26	524289	3
AU		6	12	17		6		41	58	458756	16
BD		1		4				5	17	720897	5
CN	2	2	1	7			1	13	40	327681	14
HK	2	5	1	11		1		20	68	393220	14
ID				1	2			3	6		3
IN		2	1	6				9	13	65537	7
JP		10	2	5				17	52	65536	1
KH			1					1			
KR				1				1	4		
MM				2				2	6		2
MN				1				1	1	65536	1
MY		2		2				4	52	262144	4
NP				1				1	16	65536	1
NZ		3	1	1		1		6	7	196610	5
PG				2				2	4	65536	1
PH		1		6				7	72		6
PK		3		10				13		196608	9
SG		2		3		1		6	8	131072	3
TH		1		1		1		3	8	65536	2
TW			1					1			
Grand Total	4	41	23	90	2	12	1	173	467	3670031	100

Membership Tracking – Closures by Year Joined

Year Joined	Breach of Agreement	Discontinue / Business Not Operating	Merger/ Acquisition	Non Payment/ Non Contactable	Transfer to NIR	Transfer to Other Accounts	Transfer to Other RIR	Grand Total
1998				1				1
1999		1						1
2001		1						1
2002			1					1
2003				1				1
2004			1			1		2
2005		1	2	2		1		6
2006			2	2				4
2007			1	1		2		4
2008			1	2		1		4
2009			1	4		1		6
2010			1	2				3
2011		2	3	3	1	1		10
2012		7	3	15		2		27
2013		9	2	5		1		17
2014	1	3		4	1	1		10
2015	1	4	2	12		1		20
2016	2	6	3	15			1	27
2017		5		21				26
2018		2						2
Grand Total	4	41	23	90	2	12	1	173

Statement of Income - Expenses

EXPENSES (AUD)	YTD Actual Oct 2018	YTD Actual Oct 2017	Variance %	Budget 2018	Forecast 2018	Budget Variance %
Bank service fees	161,819	149,855	8%	180,500	194,000	7%
Communication expenses	460,827	473,000	-3%	581,328	540,238	-7%
Computer expenses	657,375	547,480	20%	886,136	827,000	-7%
Contribution to APNIC Foundation	540,686	512,634	5%	700,683	690,000	-2%
Depreciation expense	713,216	673,810	6%	827,368	850,000	3%
Doubtful debt expenses	-4,832	7,493	-164%	25,000	25,000	0%
ICANN contract fee	232,388	209,794	11%	248,340	278,866	12%
Insurance expense	159,363	144,744	10%	186,000	189,738	2%
Meeting and training expenses	370,295	365,199	1%	479,000	435,000	-9%
Membership fees	40,620	44,957	-10%	52,840	49,222	-7%
Office operating expenses	282,591	269,198	5%	352,425	352,242	-0%
Postage & delivery	41,603	37,068	12%	39,000	43,500	12%
Printing & photocopy	27,158	24,511	11%	39,000	35,000	-10%
Professional fees	1,174,350	1,047,675	12%	1,813,500	1,650,000	-9%
Recruitment expense	176,068	118,411	49%	120,000	200,000	67%
Salaries and personnel expenses	9,440,961	8,922,277	6%	12,094,603	11,945,000	-1%
Sponsorship and Publicity expenses	559,046	451,896	24%	860,730	820,000	-5%
Staff training/ Conference expenses	127,947	119,348	7%	157,500	162,500	3%
Translation expenses	6,763	8,700	-22%	23,500	8,500	-64%
Travel expenses	1,755,307	1,738,981	1%	2,250,000	2,100,000	-7%
TOTAL EXPENSES	16,923,551	15,867,032	6%	21,917,453	21,395,806	-2%
OPERATING SURPLUS/(DEFICIT)	1,736,087	1,722,457	1%	246,564	909,309	269%

All amounts in AUD – Australian Dollars

Statement of Income - Expenses

Expenses tracking \$810k(5%) below budget

- **ICANN contract fees** will be higher in 2018 than anticipated in the budget due to the devaluation of the Australian dollar against the USD
- **Salaries & Personnel expenses** – below budget by \$174k
 - Impacts from the January restructure
 - Timing taken to recruit vacant positions
 - Timing of leave
 - Expected to be closer to around \$150k below budget at the end of 2018
- **Professional fees** below budget by \$316k
 - Timing on engaging consultancy services such as technical assistance, community collaboration
 - Non-staff trainers and technical consultants \$100k not utilised in 2018
 - Content development and Academy development, usability testing will be below budget
 - ISMS Audit and Consulting will not incur these costs in 2018 of around \$31k
 - Expect to be \$164k below at the end of 2018
- **Recruitment expenses** are tracking above budget at the end of October by \$76k, this trend will continue with an overspend of \$80k forecast by the end of the year. A reliance on external agencies to attract suitable candidates.

Statement of Income - Expenses

- **Travel expenses** are below budget by \$120k at the end of October due to the timing of events, it is forecast that travel will be below budget by close to \$150k by the end of 2018
- **Communication expenses** are below budget by \$24k at the end of October and is forecast to be \$41k below budget at the end of 2018.
 - Savings related to the implementation of the new VOIP system
 - Load balancing costs for secondary DNS hosting for cloud storage backup will be less than budget in 2018.
- **Computer expenses** continue to track lower than budget with savings in licensing costs and maintenance agreements contributing to an estimated underspend of \$59k expected by the end of 2018. New licensing costs are significantly less expensive for those items included in the Connecting-up agreement for Non-profits.
 - Salesforce applications will be \$20k below the budget provision
 - Provisions for hardware maintenance and support will be below budget by \$25k
 - Vmware license will be \$15k below budget
- **Meeting and Training expenses** are \$70k below budget at the end of October, it is forecast to end 2018, \$44k below budget, the main driver of this variance relates to the provision for venues for training, generally training venue has been provided by local hosts. Provisions for equipment and AV rental, signage for APNIC conferences was also much less than the provisions in the budget for 2018
- **Sponsorship and Publicity** expenses are tracking below budget by \$65k, this variance is related to the timing of the sponsorship of events, by the end of 2018

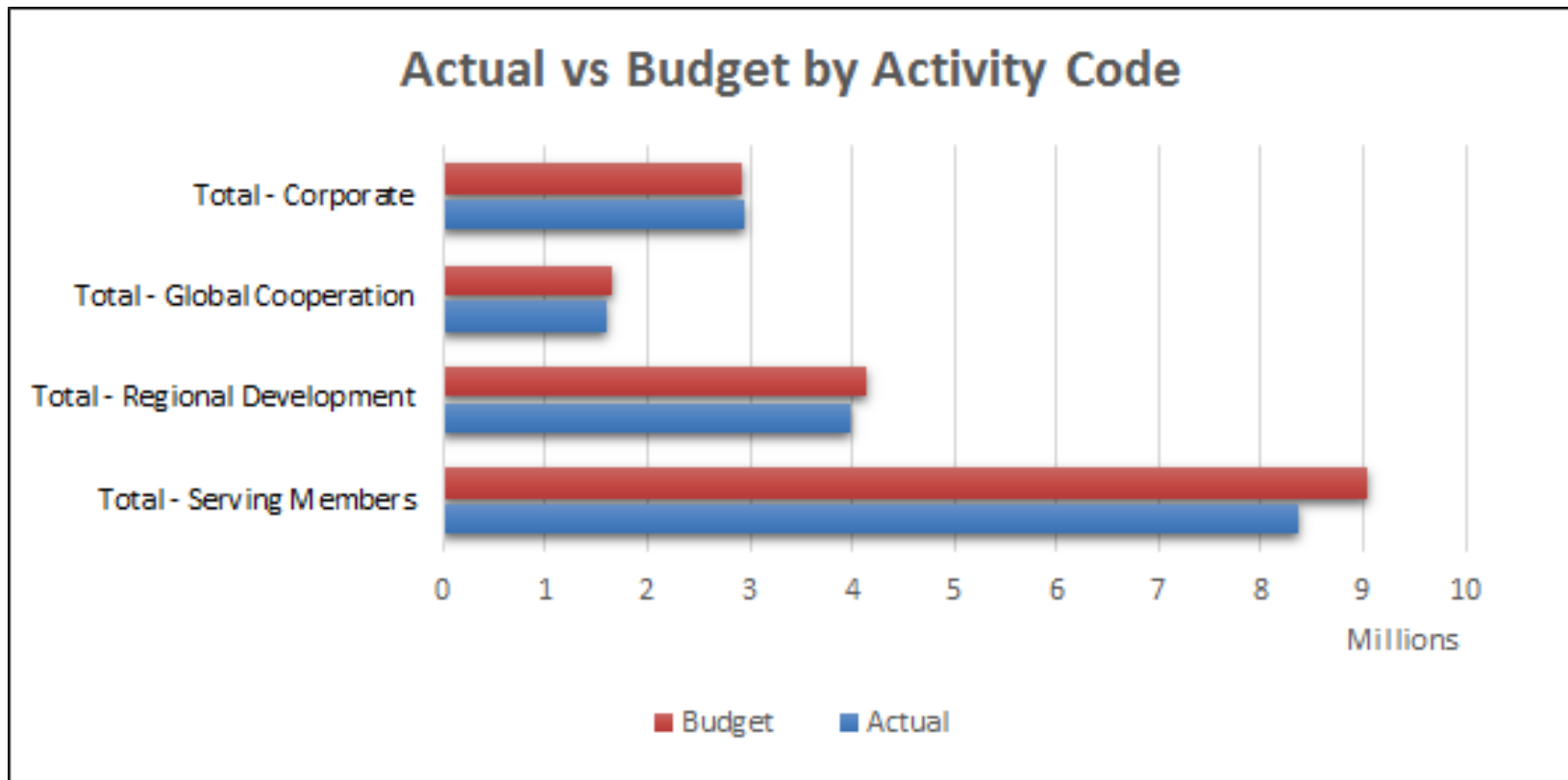
Capital Expenditure

CAPITAL (AUD)	YTD Actual Oct 2018	YTD Actual Oct 2017	Variance %	Budget 2018	Forecast 2018	Budget Variance %
Equipment & Software	347,346	383,588	-9%	923,800	575,000	-38%
Office Furniture & Fittings	30,093	105,927	-72%	90,000	115,000	28%
Total - Capital Expenditure	377,439	489,514	-23%	1,013,800	690,000	-32%

Cash Flow YTD October 2018

Accounts	YTD Oct 2018
Operating Activities	
Net Income	1,736,087
Adjustments to Profit/(Loss)	
Accounts Receivable	-73,121
Other Current Asset	-291,149
Accounts Payable	64,744
Sales Tax Payable	-9,967
Other Current Liability	888,198
Total Adjustments to Profit/(Loss)	578,706
Total Operating Activities	2,314,793
Investing Activities	
Fixed Asset	355,236
Other Asset	-1,961,324
Total Investing Activities	-1,606,088
Financing Activities	
Long Term Liability	-108,499
Equity	-76,986
Total Financing Activities	-185,485
Net Change in Cash for Period	523,220
Cash at Beginning of Period	7,850,592
Cash at End of Period	8,373,812

Expenses by Activity



Expenses by Activity – YTD October

EXPENSES (AUD)	YTD Actual Oct 2018	YTD Budget Oct 2018	Variance \$	Variance %
Facilities	534,365	530,841	3,524	1%
Finance & Administration	1,151,776	1,141,305	10,471	1%
Human Resource Management	796,500	757,664	38,836	5%
Legal & Governance	466,907	484,342	-17,435	-4%
Total - Corporate	2,949,548	2,914,152	35,396	1%
Global Research	529,315	500,815	28,500	6%
Global Technical Community	857,755	925,608	-67,853	-7%
Inter-governmental Outreach	219,904	218,821	1,083	0%
Total - Global Cooperation	1,606,974	1,645,244	-38,270	-2%
APNIC Conferences	1,301,768	1,289,614	12,154	1%
APNIC Foundation	557,213	592,230	-35,017	-6%
Community Engagement	996,503	1,152,039	-155,536	-14%
Regional Technical Development	1,141,397	1,098,753	42,644	4%
Total - Regional Development	3,996,881	4,132,636	-135,755	-3%
Customer Service	3,193,333	3,378,268	-184,935	-5%
Member Training	1,225,195	1,392,401	-167,206	-12%
Registration Services	1,297,246	1,355,650	-58,404	-4%
Technical Infrastructure	2,654,373	2,915,547	-261,174	-9%
Total - Serving Members	8,370,147	9,041,866	-671,719	-7%
Total - Expenses	16,923,551	17,733,898	-810,347	-5%

Questions?

Other issues for consideration

- Changes to the international accounting standards

New accounting standards

- AASB 15 Revenue Standard
 - Sign-Up fee
 - Reactivation fee
 - Transfer Fees
- AASB 16 Leases
 - Leases greater than 12 months
- AASB 9 Financial Instruments
 - Investment Fund

New accounting standards

Accounting Standard	Likely to affect	Auditor request	Potential Impact	Status	Action Required
•AASB 15 Revenue Standard	Sign-Up fee revenue	Recognise over membership life	Increased complexity in accounting treatment and impact on revenue for 2018 onward	Auditors agree not Material amt.	Nil
	Reactivation fee revenue	Recognise over membership life	Increased complexity in accounting treatment and impact on revenue for 2018 onward	Auditors agree not Material amt.	Nil
	Transfer Fees revenue	Recognise over membership life	Increased complexity in accounting treatment and impact on revenue for 2018 onward	Auditors agree not Material amt.	Nil
•AASB 16 Leases	Leases greater than 12 months	Recognise over lease term	Increased complexity in accounting treatment and minor impact on revenue for 2018 onward	Still reviewing agreements and discussing with Auditors	Likely Nil
•AASB 9 Financial Instruments	Movement in Investment Portfolio	Change in Investment Value to be recognised in Revenue statement	Change in net surplus/deficit Dec 2018 onward	Auditors investigating possibility of reported outside normal operating Revenue Statement	Include new Extraordinary Item after Operating surplus/deficit

Monthly Financial Report

(in AUD)

October 2018

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1 Executive Summary

This financial report for October 2018 is compared to the actuals for same period last year and the 2018 budget. The report shows an operating surplus of \$1.7m, with forecast revenue of \$22.3m (+1%) forecast expenses of \$21.4m (-2%) less than budget resulting in a forecast surplus of \$0.91m at the end of 2018.

Revenues:

- **Membership fees and Sign-Up fees** income has been tracking close to budget estimates in 2018 and is expected the end 2018 very close to the budget estimate. The actual number of new members to date is 686, which is slightly under the budget of 700, this variance is offset by the number of closures of 173, well below the budget assumption of 260 at the end of October 2018.
- **Investment income:** Interest income is tracking close to budget for the year to date, however, Investment income is forecast to continue tracking below budget for the remainder of the year. The APNIC portfolio was weaker in October, the main drivers of weak equity market returns were the rising yields and inflationary fears in the US, an escalation in China-US trade war rhetoric, and weaker forward guidance by companies reporting in the US. Whilst the US continues to fire on all cylinders, the Australian economy is showing mixed signals.

The APNIC portfolio has achieved a return of 2.07% in 2018 compared to the benchmark (CPI + 2.5%) of 3.78% in 2018, this drop in performance comes from a sharp equity sell-off in October with the Australian market down -6.05%, the US down -4.84%, Europe down -5.70%, Japan down -6.58% and Emerging Markets down -6.61%, all in AUD terms. Since inception, the portfolio has returned 4.82% against the benchmark (CPI + 2.5%) of 4.43%.

Expenses:

- **Communication expenses** will be below budget at the end of 2018 by \$41k, provisions for; cloud storage, anycast global load-balancing for RDAP and whois, anycast secondary DNS hosting, and VOIP maintenance and call costs will not be fully utilised by the end of 2018.
- **Computer expenses** will end 2018 below budget by over \$40k, some provisions for licensing costs such as; Firewall and Intrusion detection, maintenance for DNSSEC signers, NetSuite ERP, and licensing for Salesforce and Pardot applications will not be fully utilised.
- **Professional fees** are below budget. Budgeted expenditure for external technical assistance and non-staff trainers is forecast to be underutilized by \$163k at the end of 2018. Provisions for; technical assistance and travel, content development, ISMS consulting and audit, as well as planned expenditure for Academy development will also be underspent.
- **Recruitment expenses** continue to track above the budget estimate. This is caused by using external agencies to engage staff in a highly competitive environment.
- **Salaries and personnel expenses** are tracking above budget however, the end of year forecast is expected to be \$150k below budget.
- **Travel expenses** are low compared to budget due to the timing of planned activities. It is forecast that overall travel expenses will be below budget by around \$150k at the end of 2018.

Capital Expenditure on equipment and software is tracking below budget. It is forecast that the budget provisions will be underutilised in 2018 by \$324k; the major variances relate to provisions for; new Root Server installations/upgrade worth \$95k, Labs Servers \$40k, Stats & Data Development Work \$43k, New IXP Development \$120k, APNIC Portal Development work of \$100k.

Office furniture and fittings will exceed the budget provision by \$25k, driven by the upgrades to the media room and refurbishment of the front entrance.

2 Statement of Financial Position

	31/10/2018	Year End 2017	% Change
CURRENT ASSETS			
Cash/ Term deposits	8,373,812	7,850,592	7%
Receivables	1,459,656	1,284,166	14%
Others	959,258	770,479	25%
TOTAL CURRENT ASSETS	10,792,726	9,905,236	9%
NON-CURRENT ASSETS			
Other financial assets	24,854,696	22,893,372	9%
Property, plant and equipment	7,390,675	7,745,911	-5%
Deferred tax assets/ liabilities	202,401	202,401	0%
TOTAL NON-CURRENT ASSETS	32,447,772	30,841,683	5%
TOTAL ASSETS	43,240,497	40,746,920	6%
CURRENT LIABILITIES			
Payables	1,150,177	1,086,670	6%
Provisions	1,796,691	1,424,271	26%
Unearned revenue	10,249,842	9,742,793	5%
TOTAL CURRENT LIABILITIES	13,196,709	12,253,734	8%
NON - CURRENT LIABILITIES			
Deferred Tax Liabilities	466,112	466,112	0%
Total Provisions	210,563	319,062	-34%
TOTAL NON-CURRENT LIABILITIES	676,674	785,173	-14%
TOTAL LIABILITIES	13,873,384	13,038,907	6%
NET ASSETS	29,367,114	27,708,013	6%
EQUITY			
Share capital	1	1	0%
Reserves other financial assets investment	1,079,566	1,156,552	-7%
Retained earnings	26,551,460	24,996,361	6%
Net Income	1,736,087	1,555,099	12%
TOTAL EQUITY	29,367,114	27,708,013	6%

Table 1. Statement of Financial Position

3 Statement of Income

	YTD Actual Oct 2018	YTD Actual Oct 2017	Variance %	Budget 2018	Forecast 2018	Budget Variance %
Investment income	799,866	706,223	13%	960,000	870,000	-9%
Membership fees	16,781,065	16,029,538	5%	20,182,202	20,208,000	0%
Non-members fees	208,683	219,498	-5%	237,315	253,115	7%
Reactivation fees	21,000	20,700	1%	23,500	24,000	2%
Sign-Up fees	282,000	314,750	-10%	378,000	331,000	-12%
Transfer fees	141,606	99,869	42%	130,000	165,000	27%
Sundry income	425,418	198,912	114%	253,000	454,000	79%
TOTAL REVENUE	18,659,637	17,589,490	6%	22,164,017	22,305,115	1%
Bank service fees	161,819	149,855	8%	180,500	194,000	7%
Communication expenses	460,827	473,000	-3%	581,328	540,238	-7%
Computer expenses	657,375	547,480	20%	886,136	827,000	-7%
Contribution to APNIC Foundation	540,686	512,634	5%	700,683	690,000	-2%
Depreciation expense	713,216	673,810	6%	827,368	850,000	3%
Doubtful debt expenses	-4,832	7,493	-164%	25,000	25,000	0%
ICANN contract fee	232,388	209,794	11%	248,340	278,866	12%
Insurance expense	159,363	144,744	10%	186,000	189,738	2%
Meeting and training expenses	370,295	365,199	1%	479,000	435,000	-9%
Membership fees	40,620	44,957	-10%	52,840	49,222	-7%
Office operating expenses	282,591	269,198	5%	352,425	352,242	-0%
Postage & delivery	41,603	37,068	12%	39,000	43,500	12%
Printing & photocopy	27,158	24,511	11%	39,000	35,000	-10%
Professional fees	1,174,350	1,047,675	12%	1,813,500	1,650,000	-9%
Recruitment expense	176,068	118,411	49%	120,000	200,000	67%
Salaries and personnel expenses	9,440,961	8,922,277	6%	12,094,603	11,945,000	-1%
Sponsorship and Publicity expenses	559,046	451,896	24%	860,730	820,000	-5%
Staff training/ Conference expenses	127,947	119,348	7%	157,500	162,500	3%
Translation expenses	6,763	8,700	-22%	23,500	8,500	-64%
Travel expenses	1,755,307	1,738,981	1%	2,250,000	2,100,000	-7%
TOTAL EXPENSES	16,923,551	15,867,032	6%	21,917,453	21,395,806	-2%
OPERATING SURPLUS/(DEFICIT)	1,736,087	1,722,457	1%	246,564	909,309	269%

Table 2. Statement of Income

4 Capital Expenditure

CAPITAL (AUD)	YTD Actual Oct 2018	YTD Actual Oct 2017	Variance %	Budget 2018	Forecast 2018	Budget Variance %
Equipment & Software	347,346	383,588	-9%	923,800	575,000	-38%
Office Furniture & Fittings	30,093	105,927	-72%	90,000	115,000	28%
Total - Capital Expenditure	377,439	489,514	-23%	1,013,800	690,000	-32%

Table 3. Capital Expenditure by Category

5 Activity Reporting

5.1 Expenses by Activity Code

EXPENSES (AUD)	YTD Actual Oct 2018	YTD Budget Oct 2018	Variance \$	Variance %
Facilities	534,365	530,841	3,524	1%
Finance & Administration	1,151,776	1,141,305	10,471	1%
Human Resource Management	796,500	757,664	38,836	5%
Legal & Governance	466,907	484,342	-17,435	-4%
Total - Corporate	2,949,548	2,914,152	35,396	1%
Global Research	529,315	500,815	28,500	6%
Global Technical Community	857,755	925,608	-67,853	-7%
Inter-governmental Outreach	219,904	218,821	1,083	0%
Total - Global Cooperation	1,606,974	1,645,244	-38,270	-2%
APNIC Conferences	1,301,768	1,289,614	12,154	1%
APNIC Foundation	557,213	592,230	-35,017	-6%
Community Engagement	996,503	1,152,039	-155,536	-14%
Regional Technical Development	1,141,397	1,098,753	42,644	4%
Total - Regional Development	3,996,881	4,132,636	-135,755	-3%
Customer Service	3,193,333	3,378,268	-184,935	-5%
Member Training	1,225,195	1,392,401	-167,206	-12%
Registration Services	1,297,246	1,355,650	-58,404	-4%
Technical Infrastructure	2,654,373	2,915,547	-261,174	-9%
Total - Serving Members	8,370,147	9,041,866	-671,719	-7%
Total - Expenses	16,923,551	17,733,898	-810,347	-5%

Table 4. Expense by Activity Code

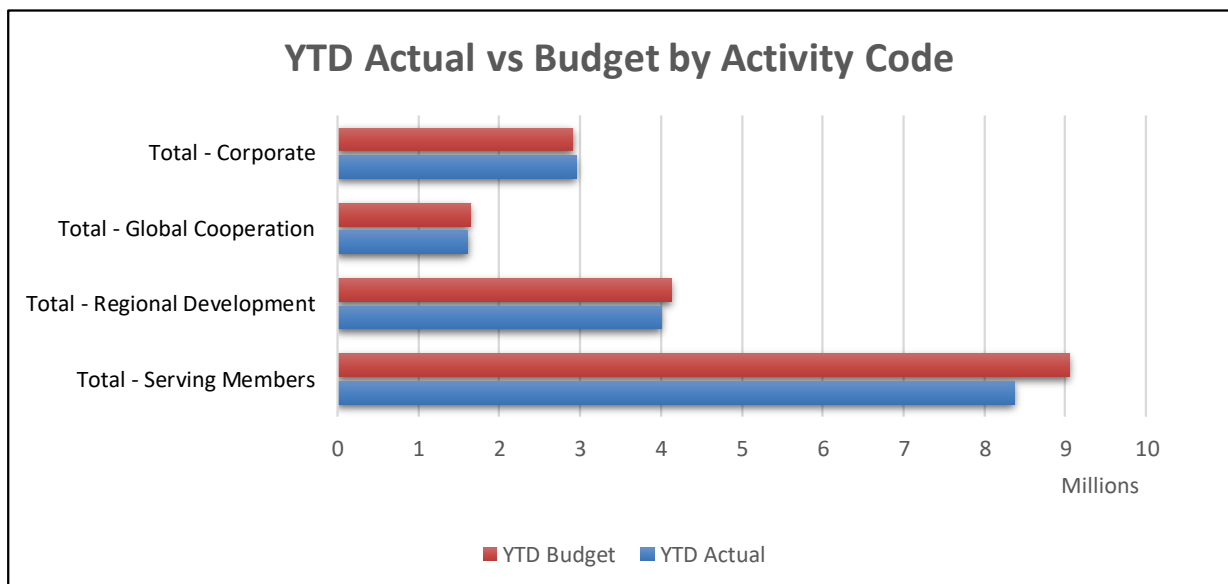


Figure 1. YTD Actual vs. Budget by Activity

5.2 Capital Expenditure by Activity Code

CAPITAL EXPENSES (AUD)	YTD Actual Oct 2018	YTD Budget Oct 2018	Variance \$	Variance %
Facilities	29,593	75,000	-45,407	-61%
Finance & Administration	8,613	7,500	1,113	15%
Human Resource Management				
Legal & Governance				
Total - Corporate	38,206	82,500	-44,294	-54%
Global Research				
Global Technical Community				
Inter-governmental Outreach				
Total - Global Cooperation				
APNIC Conferences		10,830	-10,830	-100%
APNIC Foundation				
Community Engagement				
Regional Technical Development	6,365	262,500	-256,135	-98%
Total - Regional Development	6,365	273,330	-266,965	-98%
Customer Service	188,536	272,910	-84,374	-31%
Member Training	13,471	47,500	-34,029	-72%
Registration Services				
Technical Infrastructure	130,861	168,580	-37,719	-22%
Total - Serving Members	332,868	488,990	-156,122	-32%
Total - Capital Expenses	377,439	844,820	-467,381	-55%

Table 5. Capital Expenditure by Activity Code

6 APNIC Reserve

6.1 Cash Flow Statement

Accounts	YTD Oct 2018
Operating Activities	
Net Income	1,736,087
Adjustments to Profit/(Loss)	
Accounts Receivable	-73,121
Other Current Asset	-291,149
Accounts Payable	64,744
Sales Tax Payable	-9,967
Other Current Liability	888,198
Total Adjustments to Profit/(Loss)	578,706
Total Operating Activities	2,314,793
Investing Activities	
Fixed Asset	355,236
Other Asset	-1,961,324
Total Investing Activities	-1,606,088
Financing Activities	
Long Term Liability	-108,499
Equity	-76,986
Total Financing Activities	-185,485
Net Change in Cash for Period	523,220
Cash at Beginning of Period	7,850,592
Cash at End of Period	8,373,812

Table 6. Cash Flow Statement

6.2 Capital Reserve

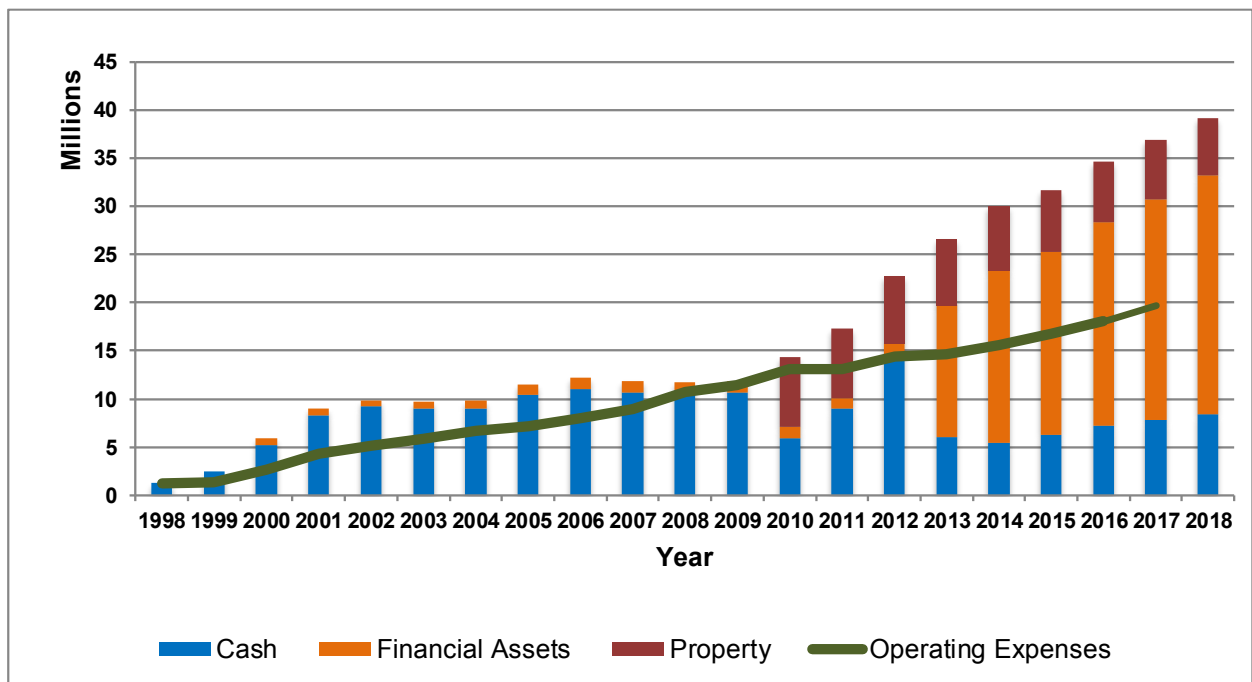


Figure 2. APNIC Reserves

6.3 APNIC's Equity and Reserves

By comparing the Total Equity (including retained earnings and unrealised capital gains), the Daily Operating Costs, the number of month's coverage of operational expenses is set out below:

	YTD 2018	2017	2016	2015
Total Equity	\$29,367,114	\$27,708,013	\$25,647,507	\$23,319,460
% Equity covered by Cash/ Cash Equivalents	113.1%	111.0%	110.6%	121.6%
Forecast/ Actual Daily Operating Expenses	\$58,619	\$53,909	\$49,430	\$46,077
Number of Months of expenses covered by Equity	16.47	16.90	17.01	16.64

Table 7. Equity and Reserves

7 Membership

7.1 Membership by Category

Membership	Total Dec 2017	YTD New Oct 2018	YTD Reactivate Oct 2018	YTD (Closed) Oct 2018	YTD Size Change Oct 2018	Total Oct 2018	% Total
Extra Large	23	0	0	0	0	23	0%
Very Large	41	0	0	0	3	44	1%
Large	138	1	0	-2	3	140	2%
Medium	473	5	0	-6	13	485	7%
Small	2,971	275	4	-71	119	3,298	44%
Very Small	2,769	383	3	-64	-140	2,951	43%
Associate	132	22	0	-30	2	126	2%
TOTAL	6,547	686	7	-173	0	7,067	100%

Table 8. Membership by Category

7.2 Membership Growth

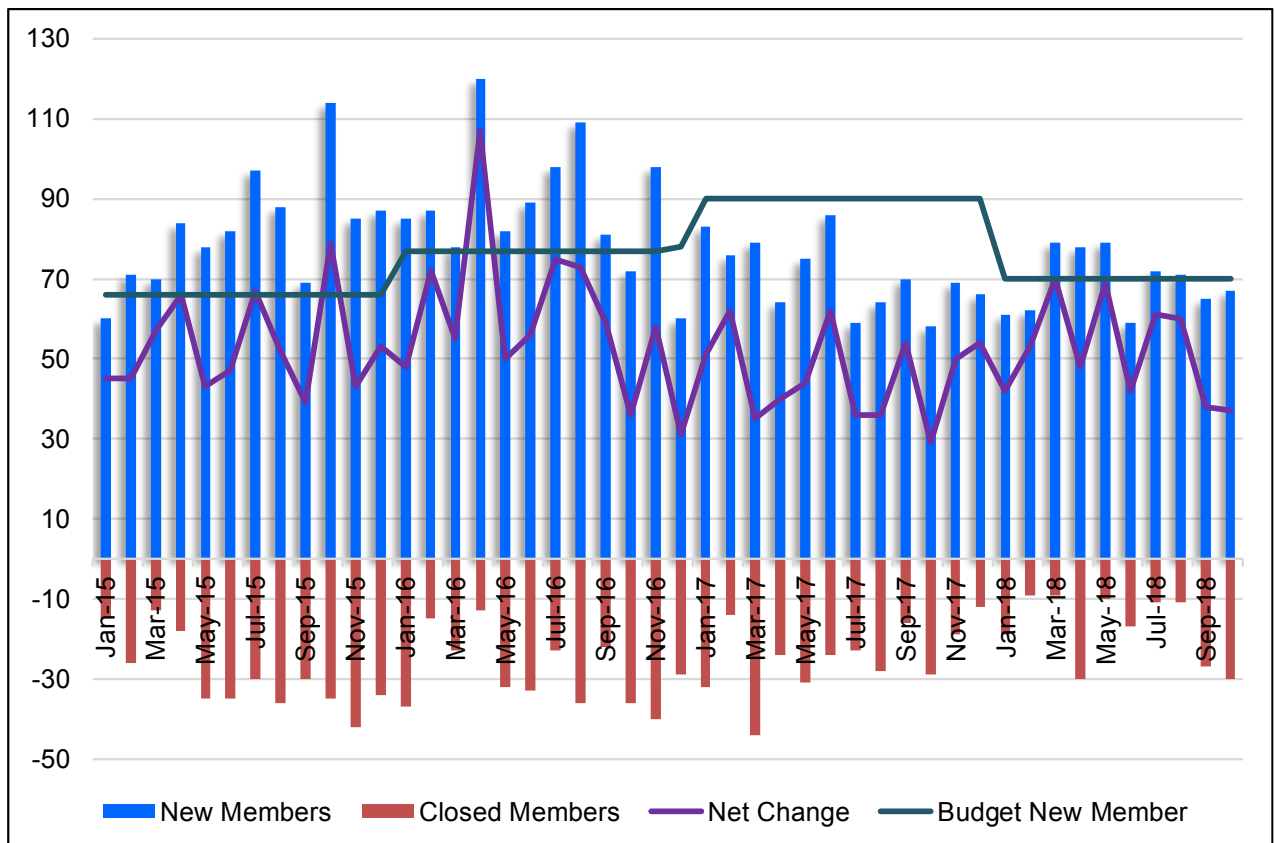


Figure 3. Membership Growth Analysis

7.3 Year-to-Date Membership Movement by Economy

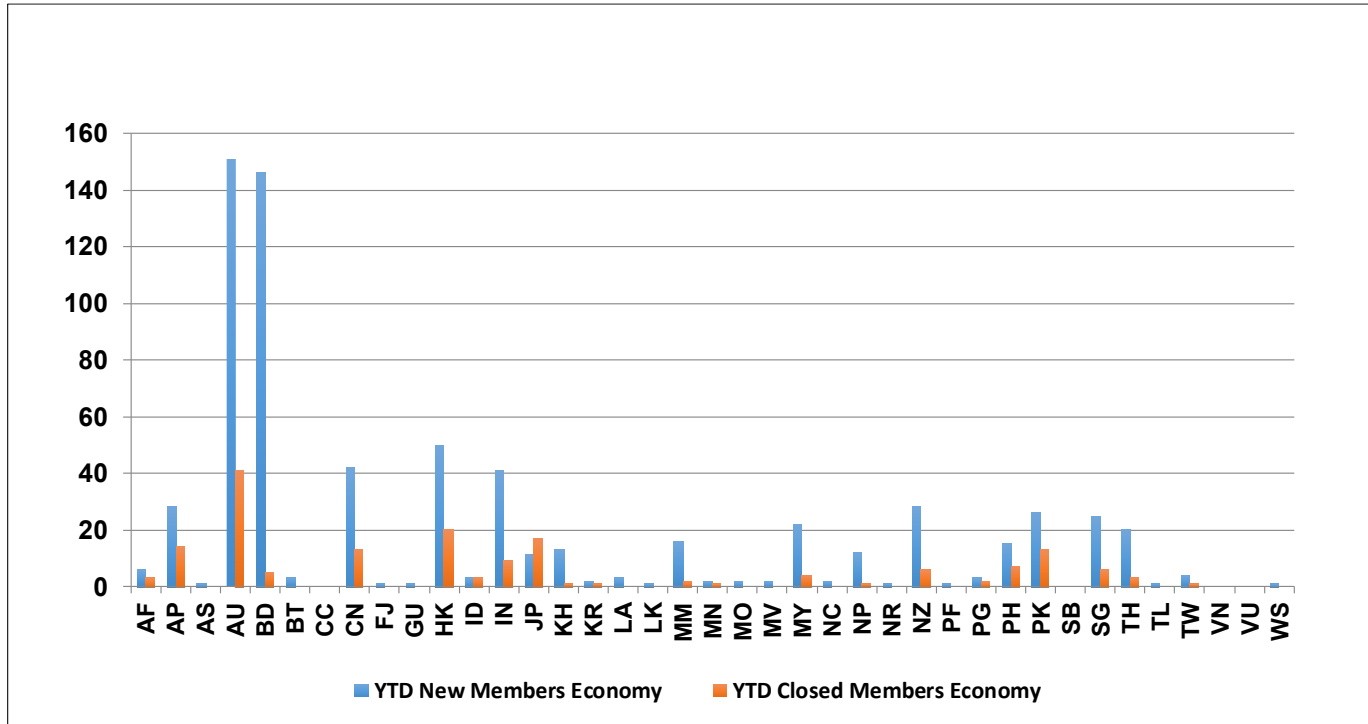


Figure 4. New and Closed Members Analysis

7.4 Membership Closures by Year Joined

Year Joined	Breach of Agreement	Discontinue/ Business Not Operating	Merger/ Acquisition	Non Payment/ Non Contactable	Transfer to NIR	Transfer to Other Accounts	Transfer to Other RIR	Grand Total
1998				1				1
1999		1						1
2001		1						1
2002			1					1
2003				1				1
2004			1			1		2
2005		1	2	2		1		6
2006			2	2				4
2007			1	1		2		4
2008			1	2		1		4
2009			1	4		1		6
2010			1	2				3
2011		2	3	3	1	1		10
2012		7	3	15		2		27
2013		9	2	5		1		17
2014	1	3		4	1	1		10
2015	1	4	2	12		1		20
2016	2	6	3	15			1	27
2017		5		21				26
2018		2						2
Grand Total	4	41	23	90	2	12	1	173

Table 9. Membership Closure by Year Joined

7.5 Membership Closures by Economy

Economy	Breach of Agreement	Discontinue/ Business Not Operating	Merger/ Acquisition	Non Payment/ Non Contactable	Transfer to NIR	Transfer to Other Accounts	Transfer to Other RIR	Grand Total	IPv4 Resources Reclaimed (/24's)	IPv6 Resources Reclaimed (/48's)	ASN Reclaimed
AF				3				3	9	65537	3
AP		3	3	6		2		14	26	524289	3
AU		6	12	17		6		41	58	458756	16
BD		1		4				5	17	720897	5
CN	2	2	1	7			1	13	40	327681	14
HK	2	5	1	11		1		20	68	393220	14
ID				1	2			3	6		3
IN		2	1	6				9	13	65537	7
JP		10	2	5				17	52	65536	1
KH			1					1			
KR				1				1	4		
MM				2				2	6		2
MN				1				1	1	65536	1
MY		2		2				4	52	262144	4
NP				1				1	16	65536	1
NZ		3	1	1		1		6	7	196610	5
PG				2				2	4	65536	1
PH		1		6				7	72		6
PK		3		10				13		196608	9
SG		2		3		1		6	8	131072	3
TH		1		1		1		3	8	65536	2
TW			1					1			
Grand Total	4	41	23	90	2	12	1	173	467	3670031	100

Table 10. Membership Closure by Economy

Agenda Item 20

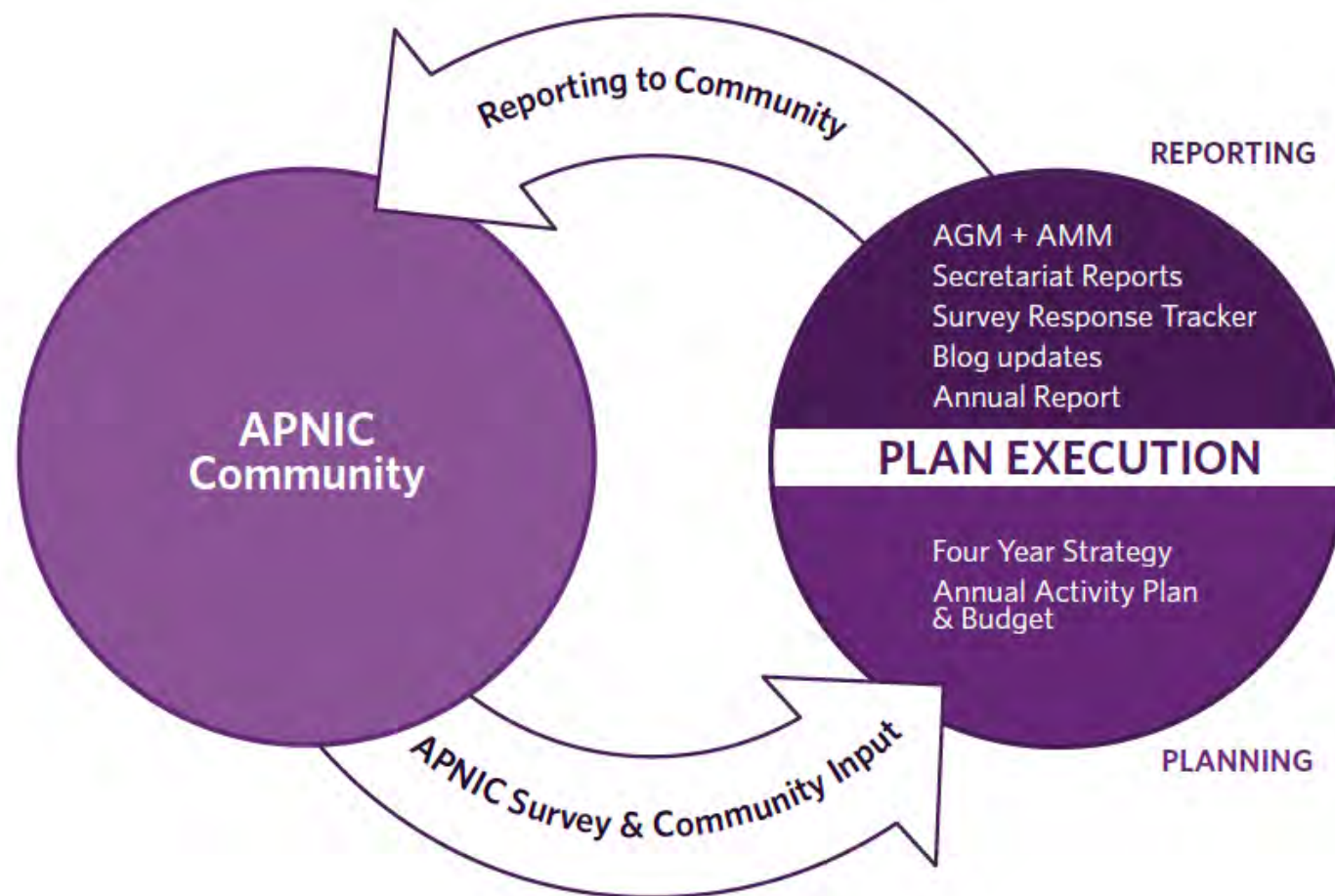
2019 Activity plan and budget

2019 Activity Plan

Overview

- Planning Process and Strategic Plan summary
- Activity Plan 2019
 - Serving Members
 - Regional Development and Outreach
 - Global Cooperation
 - Corporate
- Staff allocation (FTE)

APNIC planning process



Strategic Direction '16 to '19

1. Deliver advanced number registry and Member information services.
2. Strengthen Core Technical Focus (such as IPv6, RPKI and DNSSEC) and engage community to advance adoption and deployment.
3. Sustainably support AP Internet infrastructure growth and security, and human capacity development.
4. Engage our community to strengthen open, multistakeholder, bottom-up and transparent policy development processes and Internet governance model.
5. Maintain a strong organization to carry out APNIC's mission.

Activity Plan



Serving APNIC Members



Supporting Regional Internet
Development



Cooperating with the Global
Internet Community



Maintaining a Strong Organization



Serving Members

- Registration Services
 - All activities related to the registration of Internet number resources (IPv4, IPv6, and ASNs) and developing and maintaining the APNIC registry.
- Customer Service
 - Maintaining a high level of service to Members via the Helpdesk, MyAPNIC, Member communication, and quality management systems.
- Technical Infrastructure Services
 - Operation and maintenance of the technical infrastructure underpinning APNIC and its services, including data centres, network, systems and applications.
- Member Training
 - Technical training and technical assistance services provided throughout the region.

Regional Development

- APNIC Conferences
 - Arranging the APRICOT and APNIC conferences each year.
- Regional Technical Development
 - Support for the Policy Development Process, infrastructure development in the region, NOGs, CERTs and security programs.
- Community Engagement
 - Collaboration with other Asia Pacific Internet and Government organizations, on Internet development.
- APNIC Foundation
 - Supporting the APNIC Development program to assist in regional Internet development

Global Cooperation

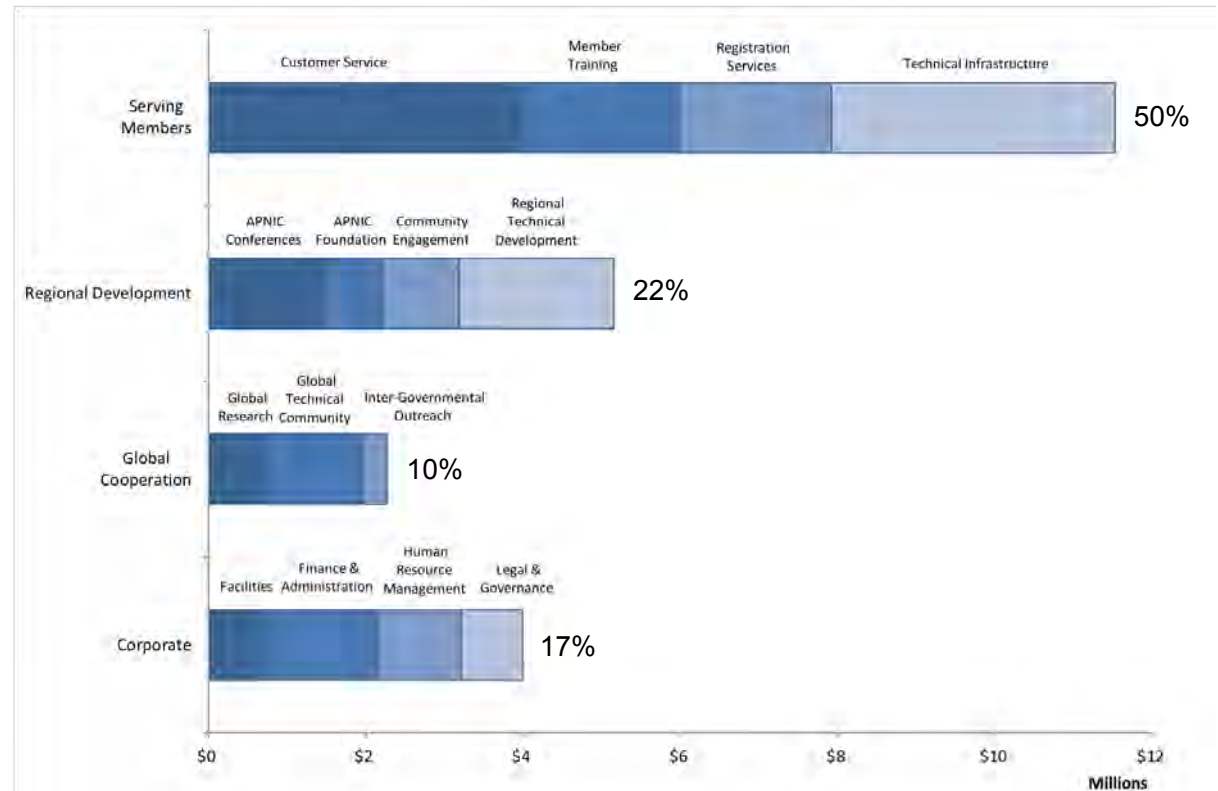
- Global Technical Community
 - Collaboration with other RIRs, global technical organizations (e.g. I*), and participation in global forums including IGF.
- Inter-governmental Outreach
 - Participation in global inter-governmental forums as a member of the technical community.
- Global Research
 - Undertaking research to world standards on global Internet trends and measurements

Corporate

- Human Resource Management
 - Managing staff resources, development and knowledge management.
- Finance and Administration
 - Managing APNIC's finance, office and travel functions.
- Legal and Governance
 - Management of all legal matters, and APNIC's compliance with relevant regulations.
- Facilities
 - Maintaining APNIC's office facilities.

Activity Summary 2019

Activity	FTE	%	Expenses (AU\$)	%	CAPEX (AU\$)	%
Serving Members	49.2	59%	\$11,515,420	50%	\$483,411	55%
Customer Service	16.0		\$3,957,397		\$36,300	
Member Training	9.0		\$2,014,799		\$53,000	
Registration Services	10.4		\$1,940,109		-	
Technical Infrastructure	13.9		\$3,603,115		\$394,111	
Regional Development & Outreach	18.2	22%	\$5,151,144	22%	\$203,000	23%
APNIC Conferences	5.1		\$1,432,559		\$3,000	
APNIC Foundation	1.2		\$761,208		-	
Community Engagement	3.7		\$994,588		-	
Regional Technical Development	8.2		\$1,962,789		\$200,000	
Global Cooperation	4.8	6%	\$2,269,206	10%	\$60,000	7%
Global Research	0.9		\$714,191		\$60,000	
Global Technical Community	3.0		\$1,248,536		-	
Inter-governmental Outreach	0.8		\$306,479		-	
Corporate	11.9	14%	\$3,993,008	17%	\$128,000	15%
Facilities	1.8		\$648,106		\$115,000	
Finance & Administration	6.8		\$1,508,088		\$9,500	
Human Resource Management	2.0		\$1,049,628		\$3,500	
Legal & Governance	1.4		\$787,186		-	
Total	84.0		\$22,928,778		\$874,411	



Registration Services

- Ongoing
 - 3.1.1.1 IPv4, IPv6 and ASN delegation and registration services
 - In 2018, APNIC processed close to 5,000 resource and transfer requests. Same level expected next year
 - 3.1.1.2 Registry operation and maintenance
 - Operation, maintenance and enhancement of Whois/RDAP, RPKI, DNS/DNSSEC, and MyAPNIC registry related functions

Registration Services

- Projects
 - 3.1.1.3 Whois IRT accuracy (prop-125 implementation)
 - Implement prop-125 requiring accurate and responsive IRT contacts in the whois database, and validation of compliance every six months.
 - 3.1.1.4 RPKI development
 - Improve RPKI services and identify opportunities for new services.
 - 3.1.1.5 Resource Quality Assurance (RQA)
 - Develop automated support for RQA – to identify operational issues related to specific address blocks; for use during address reclamation and transfer processes.
 - 3.1.1.6 Reclaiming unused IPv4 address space
 - Identify and develop definitions, approaches and mechanisms for reclamation of “unused” IPv4 address space in the APNIC region.
 - 3.1.1.7 RDAP development
 - Development of RDAP client including multilingual content, work with NIRs for adoption, work with IETF on RIR specific RDAP standards, work with other RIRs for RDAP consistency

Customer Service

- Ongoing
 - 3.1.2.1 Member Services/Helpdesk/Billing
 - Expecting to continue same workload as 2018.
 - 3.1.2.2 MyAPNIC development and maintenance
 - Continued focus on improving performance and usability, including expansion of MyAPNIC functionality.
 - 3.1.2.3 Improving online experience
 - Extension of Single-Sign-On (SSO) to all authenticated APNIC services and ongoing improvements to online services.
 - 3.1.2.4 APNIC Blog
 - In 2018, the APNIC blog published 355 posts, including 160 community guest posts, generating 480,000 views. Expected to retain this level next year
 - 3.1.2.5 New Membership outreach
 - Continuing membership outreach efforts with focus on NOGs and other operational community events alongside the Service Partner trial.
 - 3.1.2.6 Quality management
 - Full recertification audit for ISO 9001:2016 to ensure quality controls across all customer-facing processes.
 - 3.1.2.7 APNIC Survey
 - Commence planning for the 2020 APNIC Survey.

Customer Service

- Projects
 - 3.1.2.8 Service Partner Trial
 - Continued development of “Service Partner” model to improve outreach to APNIC Members according to local needs; support for three Service Partners approved for two-year trial starting in 2018.
 - 3.1.2.9 Membership lifecycle management
 - Ongoing development of systems for Member life cycle management, integrating resource management system to improve service efficiencies.

Technical Infrastructure Services

- Ongoing
 - 3.1.3.1 Data centres and interconnections
 - Maintenance of data centres and interconnections in Brisbane, data centre in Japan, improvement of network performance and peering, and routing security with full RPKI deployment.
 - 3.1.3.2 Maintenance, depreciation and licensing
 - Provisions for equipment maintenance and depreciation, and all licenses associated with this equipment.
 - 3.1.3.3 Information architecture
 - Continuing review and improvement of APNIC's information architecture and governance for better integration of systems and business processes.
 - 3.1.3.4 Business applications
 - Implementation of updated event management system for Conferences and training, HR systems, document management and other business systems systems.
 - 3.1.3.5 Virtualisation and cloud
 - Continuing migration of services to virtualized and 'cloud' infrastructure, as needed to improve online service performance and reduce capital expenditure.

Technical Infrastructure Services

- Projects
 - 3.1.3.6 Strengthening of APNIC-CSIRT
 - To strengthen security incident response and handling within APNIC (relating to APNIC systems and services) through improved internal processes and external coordination.

Member Training

- Ongoing
 - 3.1.4.1 Training services
 - Continued development of online and face-to-face courses.
 - 3.1.4.2 Community Trainers
 - Continued recruitment and development of Community Trainers
 - 3.1.4.3 Technical assistance
 - Continued response wherever possible to requests from Members for technical assistance, using Community Trainers on a cost-recovery basis.
- Projects
 - 3.1.4.4 APNIC Academy
 - Expand on-demand course content and migrate live elearning classes to APNIC Academy with new format
 - Add multilingual support to allow more users to complete courses in their native language
 - Implement support for webinars and online technical assistance

APNIC Conferences

- Ongoing
 - 3.2.1.1 APNIC Conferences
 - APRICOT 2019, Daejeon, South Korea (18 – 28 Feb)
 - APNIC 48, Chiang Mai, Thailand (5 – 12 Sep)
The program of this conference will be extended by half a day and incorporate a security track in the main program.
 - Conference expenses are reduced in 2019 due to lower cost locations.

Regional Technical Development

- Ongoing
 - 3.2.2.1 Policy
 - Support for Policy SIG meetings and mailing lists, policy review and coordination, ASO AC support.
 - 3.2.2.2 Internet exchanges, rootservers and measurement
 - Support for IXPs and DNS anycast rootservers (as a package), and anchors for the RIPE Atlas program.
 - 3.2.2.3 Network Operator Group (NOG)
 - Support will be increased in 2019 to service the growing number of NOGs in the APNIC region.
 - 3.2.2.4 Security
 - Collaboration, training, sponsorship and outreach in support of security needs of Members.
 - 3.2.2.5 RPKI
 - Increased focus on RPKI and routing security, training and technical assistance; encouraging use of RPKI ROV in regional IXPs.
 - 3.2.2.6 CERT/CSIRTs
 - Supporting development of CERT/CSIRT capabilities through advice, technical training and community engagement.
 - 3.2.2.7 IPv6
 - Training and technical assistance; information resources; encouraging deployment of unrouted IPv6 allocations.

Regional Technical Development

- Projects
 - 3.2.2.8 Network Security Product
 - Build a prototype interface alerting network operators of malicious traffic from their networks, using reports generated by APNIC's community honeynet
 - 3.2.2.9 Internet Directory
 - Inclusion of datasets on some or all of: IPv6 capacity, RDAP, WHOIS, population, and global RIR delegation statistics
 - Customize landing page for logged in users.

Community Engagement

- Ongoing
 - 3.2.3.1 Community sponsorship
 - Continued sponsorship of Asia-Pacific Internet organizations and events.
 - 3.2.3.2 Fellowship program
 - Support for participation in APNIC conferences and training, including “returning” and “youth” fellowships with a continued focus on diversity.
 - 3.2.3.3 Governments and IGOs
 - Engagement with governments and inter-governmental organizations such as APEC TEL, APT, OECD, Interpol, GFCE and ITU.
 - 3.2.3.4 Community participation
 - Promoting awareness throughout the region to build participation in APNIC Conferences, Policy Development and other community activities.
 - 3.2.3.5 Internet Governance
 - Continuing support for the Internet Governance Forum and events at a regional and national level, including schools of Internet Governance.
 - 3.2.3.6 Research & Education Networks
 - Continue developing relationships with R&E network community through APAN and other events.

Community Engagement

- Projects
 - 3.2.3.7 Community Diversity
 - Review status and measures to improve diversity (including gender, age and language) of community participation in APNIC events and activities
 - 3.2.3.8 Encouraging newcomers
 - Encourage new participants to take part in the APNIC community, particularly the next generation of network engineers.

APNIC Foundation

- Ongoing
 - 3.2.4.1 Administrative support
 - Provide approximately one FTE of staff time in support of Foundation management and administration, in addition to the two full time staff employed by the Foundation under APNIC funding (both currently seconded from the Secretariat).
 - 3.2.4.2 ISIF Asia
 - Continue existing contribution of \$160,000 to ISIF Grants and Awards, including network operations research grants; in addition to its “underwriting” contribution to Foundation operational expenses.
 - 3.2.4.3 Foundation Activities
 - Continue in accordance with the Foundation’s plans for 2019, which are separately documented.

Global Technical Community

- Ongoing
 - 3.3.1.1 RIR collaboration
 - Continued collaborate with other RIRs in 2019 through NRO coordination, joint projects, staff exchanges and meeting attendance. Focus on registry accuracy, Internet resource fraud handling processes, RDAP and RPKI.
 - 3.3.1.2 I* Collaboration
 - Continued work with ICANN to support the DNSSEC KSK rollover, and training on DNSSEC, work with ISOC on the MANRS and regional activities.
 - 3.3.1.3 External Relations
 - Coordination of all external representative activities, at global, regional and individual economy levels.

Inter-governmental Outreach

- Ongoing
 - 3.3.2.1 Inter-governmental Engagement
 - Participation in inter-governmental forums (including APEC TEL, APT, OECD, Interpol, GFCE and ITU) as a respected member of the technical community

Global Research

- Ongoing
 - 3.3.3.1 Global research and measurements
 - Continue research on IPv6, BGP, RPKI and DNSSEC, assisting discussions on Internet policy and operational matters. Research on DNS performance and behaviour (including APNIC Labs measurement system and 1.1.1.1 service), and monitoring of root server performance in the APNIC region.
 - 3.3.3.2 Research presentations
 - Presentation of research outcomes and current trends, to raise awareness, gather input and address issues faced by its community.

Human Resource Management

- Ongoing
 - 3.4.1.1 Recruitment
 - Recruitment activity and expenses are expected to be lower in 2019.
 - 3.4.1.2 Product Management
 - A Product Management approach will continue in 2019; with cross-functional teams assigned to product groups such as Membership and Registry products.
 - 3.4.1.3 Staff retention and development
 - Continued professional development, with technical certification and leadership development prioritized. Staff conference in 2019 with focus on strategic planning for 2020-2023.
- Projects
 - 3.4.1.4 Onboarding development
 - Onboarding processes will be extended to cover a more diverse and distributed workforce (including interns and community trainers) to improve knowledge and awareness of APNIC.

Finance and Administration

- Ongoing
 - 3.4.2.1 Financial management
 - Administrative activity will continue to increase from 2018 levels.
 - Appoint a new external auditor in 2019 as per Executive Council policy.
 - 3.4.2.2 Office management
 - Management of office facilities and supplies, communications, postage/shipment, business systems, and general administrative tasks.
 - 3.4.2.3 Travel management
 - Improvements to travel planning, quotations, booking, liaising with agencies and airlines, travel insurance and emergency support.
- Projects
 - 3.4.2.4 Enhancing member payment facilities
 - Identify difficulties in remitting funds to APNIC and find alternatives where possible.

Legal and Governance

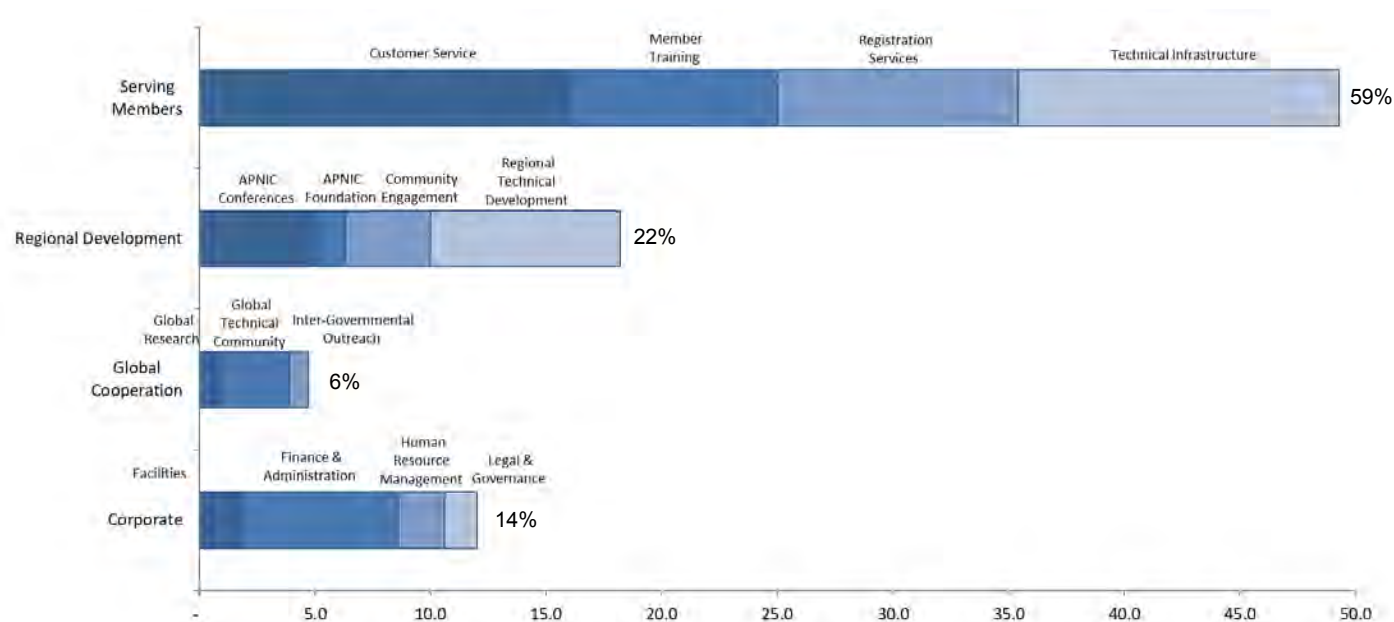
- Ongoing
 - 3.4.3.1 Legal counsel and business advisors
 - General legal advice and case handling is expected to increase in 2019.
 - A full time legal officer will be recruited to cover increased legal work and to provide for backup for the Legal Counsel.
 - Continuing review of APNIC's practices and procedures around data collection to ensure ongoing compliance with privacy principles.
 - 3.4.3.2 Workplace health and safety
 - Management of health and safety awareness, and compliance training for health and safety officers, staff and EC.

Facilities

- Ongoing
 - 3.4.4.1 Building and office facilities
 - The cost of building management, utility equipment, interior fit-outs, office furniture, building security, repair and maintenance of APNIC's office in Brisbane will increase slightly in 2019.

Staff allocation (FTE)

Activity	Total FTE	Bus	Comms	I&D	DG	HR	Srvcs	Prod Dev
Serving Members	49.2	6.1	2.0	16.3	1.7	0.1	9.9	13.1
Customer Service	16.0	3.7	1.8	0.9	1.2	-	4.4	4.0
Member Training	9.0	-	0.2	8.6	-	0.1	0.1	-
Registration Services	10.4	0.2	-	-	0.4	-	5.5	4.3
Technical Infrastructure	13.9	2.2	-	6.8	0.1	-	-	4.8
Regional Development	18.2	1.2	5.6	3.5	2.3	0.1	2.8	2.7
APNIC Conferences	5.1	0.6	2.7	0.7	-	-	-	1.1
APNIC Foundation	1.2	0.6	0.3	0.2	-	0.1	-	-
Community Engagement	3.7	-	1.3	0.8	1.4	-	0.2	-
Regional Technical Development	8.2	-	1.3	1.8	0.9	-	2.6	1.6
Global Cooperation	4.8	0.2	0.4	0.3	2.6	-	0.3	1.0
Global Research	0.9	-	-	-	0.5	-	-	0.4
Global Technical Community	3.0	0.2	0.4	0.1	1.5	-	0.3	0.5
Inter-governmental Outreach	0.8	-	-	0.1	0.6	-	-	0.1
Corporate	11.9	8.5	-	-	1.4	1.8	-	0.2
Facilities	1.8	1.6	-	-	-	-	-	0.2
Finance & Administration	6.8	6.8	-	-	-	-	-	-
Human Resource Management	2.0	-	-	-	0.2	1.8	-	-
Legal & Governance	1.4	0.2	-	-	1.2	-	-	-
Total	84.0	16.0	8.0	20.0	8.0	2.0	13.0	17.0



Questions?

2019 Activity Plan and Budget

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1 Introduction

This document explains APNIC's 2019 Activity Plan and Budget, for the information of APNIC Members and the wider community.

APNIC's activities are categorized into four "outcome areas", for purposes of activity planning, budgeting and reporting. The first three categories are aligned with the organization's strategic vision and mission, and the fourth covers administrative activities required to operate the Secretariat:

- Serving Members
- Regional Development
- Global Cooperation
- Corporate

Feedback on the plan is welcome. If you would like to comment, [please contact the APNIC Executive Council \(EC\)](#).

1.1 APNIC Planning Process

The APNIC EC and Secretariat receive input from the community through the biennial survey (apnic.net/survey), APNIC Conferences, and other interactions. These inputs guide APNIC's strategy and annual planning, and the Secretariat reports progress on its activities back to the community during the year.



1.2 Strategic Direction

The current four-year (2016-2019) strategic plan was adopted by the APNIC EC on 1 December 2015. It defines five strategic directions as follows:

1. Deliver advanced number registry and Member information services.
2. Strengthen Core Technical Focus (such as IPv6, RPKI and DNSSEC) and engage community to advance adoption and deployment.
3. Sustainably support AP Internet infrastructure growth and security, and human capacity development.
4. Engage our community to strengthen open, multistakeholder, bottom-up and transparent policy development processes and Internet governance model.
5. Maintain a strong organization to carry out APNIC's mission.

The next four-year strategic plan (2020-2023) will be developed in 2019.

1.3 APNIC Activities

APNIC activities are categorized in 15 groups, across four outcome areas, as follows.

i) Serving Members

- [Registration Services](#)
 - All activities related to the registration of Internet number resources (IPv4, IPv6, and ASNs) and developing and maintaining the APNIC registry.
- [Customer Service](#)
 - Maintaining a high level of service to Members via the Helpdesk, MyAPNIC, Member communication, and quality management systems.
- [Technical Infrastructure Services](#)
 - Operation and maintenance of the technical infrastructure underpinning APNIC and its services, including data centres, network, systems and applications.
- [Member Training](#)
 - Technical training and technical assistance services provided throughout the region.

ii) Regional Development

- [APNIC Conferences](#)
 - Arranging the APRICOT and APNIC conferences each year.
- [Regional Technical Development](#)
 - Support for the Policy Development Process, infrastructure development in the region, NOGs, CERTs and security programs.
- [Community Engagement](#)
 - Collaboration with other Asia Pacific Internet organizations, maintaining the fellowship program, participating in the regional IGF and working with Asia Pacific government organizations on Internet development.
- [APNIC Foundation](#)
 - Developing funding partnerships with international development agencies and supporting the ISIF Asia grants program.

iii) Global Cooperation

- [Global Technical Community](#)
 - Collaboration with other RIRs, global technical organizations such as ICANN, PTI, the IETF and the Internet Society, and participation in global forums such as the IGF.
- [Inter-governmental Outreach](#)

- Participation in global inter-governmental forums as a member of the technical community.
- [Global Research](#)
 - Undertaking global research and measurement and presenting outcomes at regional and global events.

iv) Corporate

- [Human Resource Management](#)
 - Managing staff resources, development and knowledge management.
- [Finance and Administration](#)
 - Managing APNIC's finance, office and travel functions.
- [Legal and Governance](#)
 - Activity related to legal matters and APNIC's compliance with workplace health and safety.
- [Facilities](#)
 - Maintaining APNIC's office facilities.

2 2019 Activity Summary

2.1 Activity Summary

The majority of APNIC's resources and expenditure in the 2019 plan are allocated to Serving Members – accounting for 59% of APNIC's full time equivalent employees, 50% of operating expenses and 55% of the capital expenditure provision.

The following tables and chart provide a breakdown of APNIC's 2019 budget, with a comparison to the 2018 budget included.

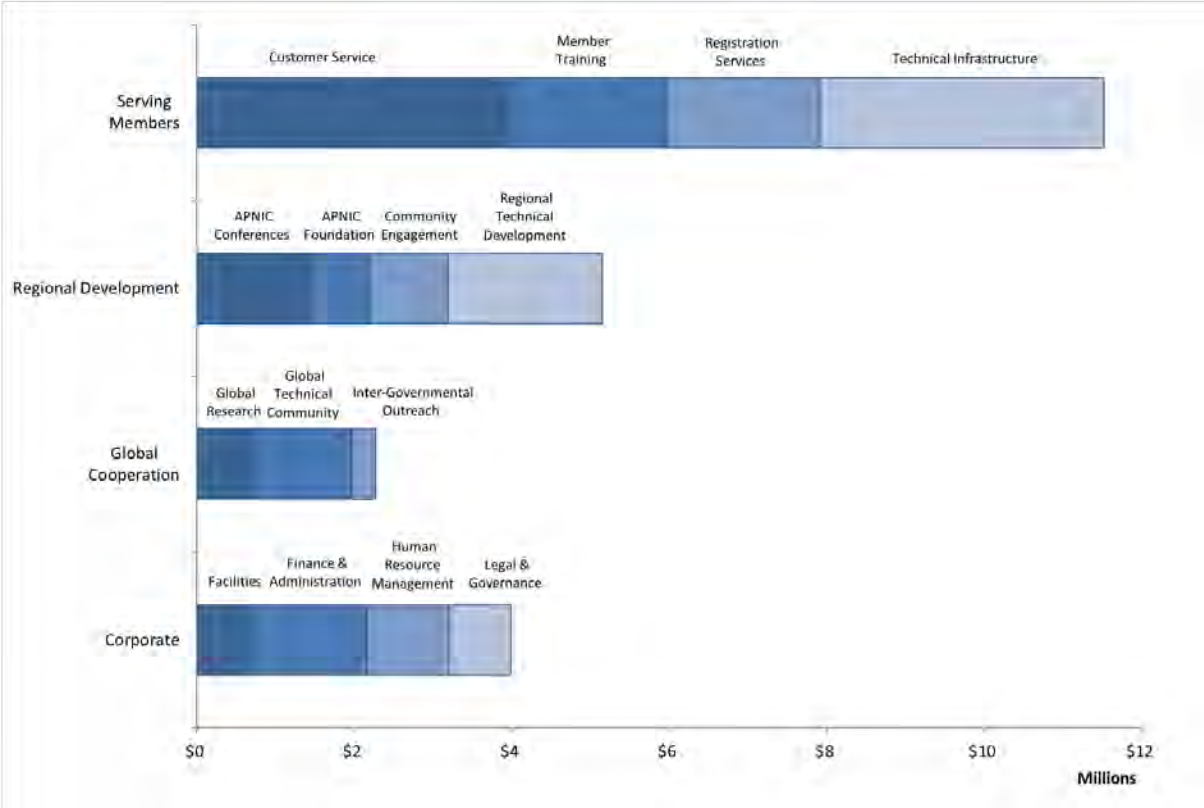
2019 Activity Budget

Activity	FTE	%	Expenses (AUD \$)	%	CAPEX (AUD \$)	%
Serving Members	49.2	59%	\$11,515,420	50%	\$483,411	55%
Regional Development	18.2	22%	\$5,151,144	22%	\$203,000	23%
Global Cooperation	4.8	6%	\$2,269,206	10%	\$60,000	7%
Corporate	11.9	14%	\$3,993,008	17%	\$128,000	15%
Grand Total	84.0		\$22,928,778		\$874,411	

Budget Comparison 2018-2019

Activity	FTE			Expenses			CAPEX		
	2019	2018	+/- %	2019 (AUD \$)	2018 (AUD \$)	+/- %	2019 (AUD \$)	2018 (AUD \$)	+/- %
Serving Members	49.2	47.6	3.4%	\$11,515,420	\$11,168,152	3.1%	\$483,411	\$586,800	-17.6%
Regional Development	18.2	16.2	12.3%	\$5,151,144	\$4,924,011	4.6%	\$203,000	\$328,000	-38.1%
Global Cooperation	4.8	4.3	11.6%	\$2,269,206	\$2,195,034	3.4%	\$60,000	-	N/A
Corporate	11.9	11.7	1.7%	\$3,993,008	\$3,630,256	10%	\$128,000	\$99,000	29.3%
Grand Total	84.0	79.8	5.3%	\$22,928,778	\$21,917,453	4.6%	\$874,411	\$1,013,800	-13.7%

2019 Budget Expense Distribution



2.2 Notes on the Activities

APNIC's activities are reported in this document under the 15 activity groups and four outcome areas described in the previous section:

- Serving Members
- Regional Development
- Global Cooperation
- Corporate

The activities are described in terms of 'Ongoing' work and 'Projects'.

- 'Ongoing' includes core, ongoing work that APNIC performs each year to meet its objectives.
- 'Projects' are short-term pieces of work with defined start and end times (most being complete within one to two years).

A table summarizes the resources (financial and human) needed to successfully complete the activities and projects in each activity group.

All monetary figures quoted are in Australian Dollars (AUD).

- **FTE:** The number of Full-Time Equivalent employees required for the activity. In all cases, contributions from more than one employee are involved, and the FTE number will comprise a percentage of time from each employee. For example – an FTE of 1.6 may be made up of four employees who each dedicate 40% (0.4) of their time to the activity, for a period of one year. The detailed matrix used to calculate estimated FTE allocations is provided on page 21.
- **Expenses:** Refers to all operational costs directly incurred by the activity (in AUD).
- **CAPEX:** Provides the provision for capital expenditure required by the activity (in AUD).

For comparative purposes, each table provides the FTE, Expense and CAPEX figures as budgeted in the 2018 Activity Plan, as well as those estimated for this 2019 plan.

Special note to the EC: the 2018 expenditure figures are forecast figures (provisions) only, and not actual figures for 2018. The final published Activity Plan will include the actual 2018 expenditure for comparison purposes.

3 APNIC 2019 Activity Plan

3.1 Serving Members

3.1.1 Registration Services

Year	FTE	Expenses	CAPEX
2018	9.2	\$1,687,192	-
2019	10.4	\$1,940,109	-

Ongoing

3.1.1.1 IPv4, IPv6 and ASN delegation and registration services

In 2018, APNIC processed close to 5,000 resource and transfer requests. It is assumed that this activity will continue at the same level and require similar resources in 2019.

3.1.1.2 Registry operation and maintenance

This activity includes operation, maintenance and enhancement of:

- The Whois Database, including RDAP.
- Resource certification services using RPKI.
- Reverse DNS service, including DNSSEC management.
- MyAPNIC registry related features, including development of public API for resource management

Projects

3.1.1.3 Whois IRT accuracy

Implement prop-125 which requires all resource holders to maintain accurate and responsive IRT contacts in the whois database, and requires APNIC to validate Member compliance with this policy every six months.

- Objectives
 - Develop functions in MyAPNIC to help users to maintain accurate IRT information.
 - Develop automated processes for periodic validation of IRT information.
- Benefits to Members
 - Improved invalid IRT contact notification and management
 - Improved responsiveness from IRT contacts

3.1.1.4 RPKI development

Improve RPKI services and identify opportunities for new services.

- Objectives
 - Continue hardening of RPKI services, including validators and the RPKI system, and improved service monitoring .
 - Improve mechanisms to support NIR services.
 - Continue development of the “Anysigner” prototype based on use cases.
 - Evaluate potential for ROA validation and notification services through MyAPNIC.
 - Collaborate with other RIRs on RPKI service development and support.
- Benefits to Members

- Improvement of routing system security
- Functional and reliable RPKI service

3.1.1.5 Resource Quality Assurance (RQA)

Develop automated support for RQA – to identify operational issues related to specific address blocks such as route filtering, email and other blacklisting, routing history, and geolocation errors; for use during address reclamation and transfer processes.

- Objectives
 - Define, validate and create an easy-to-use MyAPNIC service to check an IP address range against a configurable list of quality checks
 - Implement quality measures such as route filtering, email and other blacklisting, routing history, and geolocation errors;
- Benefits to Members
 - Reduction of operational problems associated with address space received from reclaimed or transferred space.
 - Response to APNIC Survey 2018 (Q13)

3.1.1.6 Reclaiming unused IPv4 address space

Identify and develop definitions, approaches and mechanisms for reclamation of “unused” IPv4 address space in the APNIC region.

- Objectives
 - Establish scope of activity, definition of “unused” space, and legal validation of reclamation options.
 - Establish mechanisms for identification of unused space as defined, for contacting the holders of that space.
 - Develop and implement processes for contacting holders, including options for return or transfer of addresses.
- Benefits to Members
 - Response to the 2018 APNIC Survey (Q14)
 - Additional supply of IPv4 addresses.
 - Effective stewardship of IPv4 address resources

3.1.1.7 RDAP development

Development of APNIC’s RDAP service in 2019-2020 for access to whois information.

- Objectives
 - Deployment of full-featured RDAP-based client including multilingual content
 - Work with NIRs on RDAP adoption and deployment
 - Work in IETF on RIR-specific RDAP standards
 - Work with NRO ECG on RDAP consistency
 - Improvement of APNIC training materials
- Benefits to Members
 - Availability of registration information via modern protocol
 - Improvement of whois data completeness and availability
 - Future integration with IPM and resource management systems

3.1.2 Customer Service

Year	FTE	Expenses	CAPEX
2018	17.7	\$4,172,199	\$327,500

2019	16.0	\$3,957,397	\$36,300
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Ongoing

3.1.2.1 Member Services/Helpdesk/Billing

In 2018, the Member Services team handled a quarterly average of more than 7,000 Member requests, 200 phone calls, and 870 online chat sessions. In 2018, the Finance team processed more than 16,000 Member invoices and receipts quarterly. A similar workload is expected in 2019. Continued development of feedback platform, covering all sources of Member feedback for more efficient tracking and reporting.

3.1.2.2 MyAPNIC development and maintenance

Continued focus on improving performance and usability, including expansion of MyAPNIC functionality for both resource and non-resource holders.

3.1.2.3 Improving online experience

Extension of Single-Sign-On (SSO) to all authenticated APNIC services and ongoing improvements to online services functionality and integration.

3.1.2.4 APNIC Blog

In 2018, the APNIC blog published 355 posts, including 160 community guest posts, generating 480,000 views. It is expected the Blog will maintain these readership and publication levels in 2019.

3.1.2.5 New Membership outreach

Continuing membership outreach efforts with focus on NOGs and other operational community events alongside the Service Partner trial (below).

3.1.2.6 Quality management

Full recertification audit for ISO 9001:2016 to ensure quality controls across all customer-facing processes.

3.1.2.7 APNIC Survey

Commence planning for the 2020 APNIC Survey.

Projects

3.1.2.8 Service Partner Trial

Continued development of “Service Partner” model to improve outreach to APNIC Members according to local needs; support for three Service Partners approved for two-year trial starting in 2018.

- Objectives:
 - Refine systems and procedures to manage and support Service Partners in the pilot period.
 - Measure the effectiveness of the pilot program to determine its ongoing viability.
- Benefit to members:
 - Improved Member support based on local needs.
 - Increased Membership growth due to greater awareness of APNIC services.

3.1.2.9 Membership lifecycle management

Ongoing development of systems for Member life cycle management, integrating resource management system to improve service efficiencies.

- Objectives
 - Compare options for systems integration, including Salesforce CRM and implement.
- Benefits to Members
 - Improved experience for prospective and existing Members interacting with APNIC
 - Improved Secretariat efficiency in Membership lifecycle management

3.1.3 Technical Infrastructure Services

Year	FTE	Expenses	CAPEX
2018	13.8	\$3,589,928	\$202,300
2019	13.9	\$3,603,115	\$394,111

Ongoing

3.1.3.1 Data centres and interconnections

Maintenance of two fully-redundant data centres in Brisbane, and triangular interconnections with the APNIC office and Internet. Maintenance of data centre in Japan providing additional redundancy and load-balancing. Improvement of network performance and peering at major Internet hubs, and improving routing security with full RPKI deployment.

3.1.3.2 Maintenance, depreciation and licensing

Provisions for equipment maintenance and depreciation, and all licenses associated with this equipment.

3.1.3.3 Information architecture

Continuing review and improvement of APNIC's information architecture and governance for better integration of systems and business processes.

3.1.3.4 Business applications

Implementation of updated event management system for Conferences and training, HR systems, document management and other business systems systems.

3.1.3.5 Virtualisation and cloud

Continuing migration of services to virtualized and 'cloud' infrastructure, as needed to improve online service performance and reduce capital expenditure.

Projects

3.1.3.6 Strengthening of APNIC-CSIRT

To strengthen security incident response and handling within APNIC (relating to APNIC systems and services) through improved internal processes and external coordination.

- Objectives
 - Improve handling of and response to security incidents when they happen

- Improve external coordination with Members, related organisations, CERT community and others.
- Benefits to Members
 - Faster and coordinated handling of security incidents
 - Increased reliability and availability of APNIC services

3.1.4 Member Training

Year	FTE	Expenses	CAPEX
2018	6.9	\$1,718,833	\$57,000
2019	9.0	\$2,014,799	\$53,000

Ongoing

3.1.4.1 Training services

Continued development of online and face-to-face courses to increase quality, scope, acceptance and recognition of APNIC training.

- Increased focus on practical IPv6 deployment strategies.
- Support for increased RPKI deployment, better use of IRR
- Support for best current practices including MANRS.

3.1.4.2 Community Trainers

Continued recruitment and development of Community Trainers to expand the scope and quality of APNIC training in the region, with aim to build a pool of qualified Community Trainers representing the diversity of the region.

3.1.4.3 Technical assistance

Continued response wherever possible to requests from Members for technical assistance, using Community Trainers on a cost-recovery basis.

Projects

3.1.4.4 APNIC Academy

Development of the APNIC Academy as the platform for delivery of online training and technical assistance to APNIC Members.

- Objectives
 - Expand on-demand course content and migrate live elearning classes to APNIC Academy with new format
 - Add multilingual support to allow more users to complete courses in their native language
 - Implement support for webinars and online technical assistance
- Benefits to Members
 - Greater efficiency and wider reach of APNIC training activities
 - Greater choice of online training content
 - Improved access to course content for non-English speakers
 - Improved online learning experience

3.2 Regional Development and Outreach

3.2.1 APNIC Conferences

Year	FTE	Expenses	CAPEX
2018	4.8	\$1,473,125	\$13,000
2019	5.1	\$1,432,559	\$3,000

Ongoing

3.2.1.1 APNIC Conferences

APRICOT 2019 will be held in Daejeon, South Korea (18 – 28 February 2019).

APNIC 48 will be held in Chiang Mai, Thailand (5 – 12 September 2019).

The program for the September APNIC conference will be extended by half a day and incorporate a security track in the main program. Conference expenses are reduced in 2019 due to lower cost locations.

3.2.2 Regional Technical Development

Year	FTE	Expenses	CAPEX
2018	5.3	\$1,327,792	\$315,000
2019	8.2	\$1,962,789	\$200,000

Ongoing

3.2.2.1 Policy

Support for Policy SIG meetings (twice per year) and mailing lists, Secretariat review of policy proposals, exchange of policy related information with other RIRs, and support of ASO Address Council Members from the APNIC region.

3.2.2.2 Internet exchanges, rootservers and measurement

Support for deployment and management of IXPs and DNS anycast rootservers (as a package), and deployment of anchors for the RIPE Atlas program.

3.2.2.3 Network Operator Group (NOG)

Support for technical expertise, training, and sponsorship will be increased in 2019 to service the growing number of NOGs in the APNIC region; with additional emphasis on sub-regional NOGs held outside of the APNIC Conference rotation.

3.2.2.4 Security

Collaboration with security organizations - APCERT, FIRST, Interpol, GFCE and others – in support of security best practice among Members; extending security training resources; and providing speakers, sponsorship, and support for security events in the APNIC region.

3.2.2.5 RPKI

Increased focus on RPKI and routing security, through training and technical assistance; encouraging use of RPKI ROV in regional IXPs.

3.2.2.6 CERT/CSIRTs

Supporting development of CERT/CSIRT capabilities in the Asia Pacific region by providing advice, technical training and facilitating cross-sector, public-private engagement.

3.2.2.7 IPv6

In addition to training and technical assistance; sharing of IPv6 best practice, information resources and case studies; encouraging deployment by Members with unrouted IPv6 allocations.

Projects

3.2.2.8 Network Security Product

Launch a prototype “security dashboard” in MyAPNIC which can support Members’ security needs related to IP address holdings.

- Objectives
 - Build a prototype interface alerting network operators of malicious traffic from their networks, using reports generated by APNIC’s community honeynet
- Benefits to Members
 - Response to 2018 APNIC Survey (Q11)
 - Better assessment and mitigation of some cyber threats

3.2.2.9 “Internet Directory”

Continued improvement of information service help the APNIC community and global Internet Researchers to better understand the Asia Pacific Internet network ecosystem.

- Objectives
 - Inclusion of datasets on some or all of: IPv6 capacity, RDAP, WHOAS, population, and global RIR delegation statistics
 - Customize landing page for logged in users.
- Benefits to Members
 - Response to 2016 and 2018 APNIC Survey
 - Better understanding of Internet infrastructure deployment in the region
 - Better understanding of delegation and usage of Internet number resources

3.2.3 Community Engagement

Year	FTE	Expenses	CAPEX
2018	5.1	\$1,412,411	-
2019	3.7	\$994,588	-

Ongoing

3.2.3.1 Community sponsorship

Continued sponsorship of [Asia-Pacific Internet organizations and events](#).

3.2.3.2 Fellowship program

Support for participation in APNIC conferences and training, including “returning” and “youth” fellowships with a continued focus on diversity.

3.2.3.3 Governments and IGOs

Engagement with governments and inter-governmental organizations such as APEC TEL, APT, OECD, Interpol, GFCE and ITU.

3.2.3.4 Community participation

Promoting awareness throughout the region to build participation in APNIC Conferences, Policy Development and other community activities.

3.2.3.5 Internet Governance

Continuing support for the Internet Governance Forum and events at a regional and national level, including schools of Internet Governance.

3.2.3.6 Research & Education Networks

Continue developing relationships with R&E network community through APAN and other events.

Projects

3.2.3.7 Community Diversity

Review status and measures to improve diversity (including gender, age and language) of community participation in APNIC events and activities.

- Objectives
 - Analyse demographics of conferences and other activities to develop and publish a diversity profile for community consultation
- Benefits to Members
 - Understanding of the diversity of participants in the APNIC community
 - Greater diversity of community participation in APNIC activities
 - Ability for greater number of Members to be involved in the APNIC community

3.2.3.8 Encouraging newcomers

Encourage new participants to take part in the APNIC community, particularly the next generation of network engineers.

- Objectives
 - Outreach to students and young technical professionals
 - Review APNIC’s introductory information to make the community more accessible to newcomers
- Benefits to Members
 - Greater diversity of community views
 - Greater participation in the APNIC community by younger professionals
 - Availability of the next generation of community technical leaders

3.2.4 APNIC Foundation

Year	FTE	Expenses	CAPEX
2018	1.0	\$710,683	-

2019	1.2	\$761,208	-
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Ongoing

3.2.4.1 Administrative support

Provide approximately one FTE of staff time in support of Foundation management and administration, in addition to the two full time staff employed by the Foundation under APNIC funding (both currently seconded from the Secretariat).

3.2.4.2 ISIF Asia

Continue existing contribution of \$160,000 to ISIF Grants and Awards, including network operations research grants; in addition to its “underwriting” contribution to Foundation operational expenses.

3.2.4.3 Foundation Activities

Continue in accordance with the Foundation’s plans for 2019, which are separately documented.

3.3 Global Cooperation

3.3.1 Global Technical Community

Year	FTE	Expenses	CAPEX
2018	2.8	\$1,314,340	-
2019	3.0	\$1,248,536	

Ongoing

3.3.1.1 RIR collaboration

Continued collaborate with other RIRs in 2019 through NRO coordination, joint projects, staff exchanges and meeting attendance. NRO activities will include collaborating on registry accuracy, Internet resource fraud handling processes, RPKI measurement, and completing follow up actions from the ASO Review.

3.3.1.2 I* Collaboration

Continued work with ICANN to support the DNSSEC Root Zone Key Signing Key rollover (revocation of KSK-2010 and measurement data for future key rollovers), deliver training on DNSSEC, and participate in the Security and Stability Advisory Committee (SSAC), work with ISOC on the MANRS initiative.

3.3.1.3 External Relations

Coordination of all external representative activities, at global, regional and individual economy levels.

3.3.2 Inter-governmental Outreach

Year	FTE	Expenses	CAPEX
2018	0.6	\$269,922	-
2019	0.8	\$306,479	

Ongoing

3.3.2.1 Inter-governmental Engagement

Participation in inter-governmental forums (including APEC TEL, APT, OECD, Interpol, GFCE and ITU) as a recognized member of the technical community advocating:

- The importance of training and technical assistance (human capacity building) to the security and stability of Internet infrastructure, at the Internet layer.
- The necessity of IPv6 adoption for future Internet growth.
- The role of the RIRs and numbering community in supporting Internet security, through services and outreach to the Public Safety sector in particular.
- The role of the APNIC community in the Internet ecosystem and the multistakeholder model of Internet governance.

3.3.3 Global Research

Year	FTE	Expenses	CAPEX
2018	0.9	\$610,772	-
2019	0.9	\$714,191	\$60,000

Ongoing

3.3.3.1 Global research and measurements

Continue research and measurement of technologies including IPv6, BGP, RPKI and DNSSEC, assisting discussions on Internet policy and operational matters within the region and globally. Research activities will include measurement of DNS performance and behaviour (based on the APNIC Labs measurement system and data from the 1.1.1.1 service), and monitoring of root server performance in the APNIC region.

3.3.3.2 Research presentations

Presentation of research outcomes and current trends, to raise awareness, gather input and address issues faced by its community.

3.4 Corporate

3.4.1 Human Resource Management

Year	FTE	Expenses	CAPEX
2018	2.0	\$930,620	-
2019	2.0	\$1,049,628	\$3,500

Ongoing

3.4.1.1 Recruitment

Recruitment activity and expenses are expected to be lower in 2019.

3.4.1.2 Product Management

A Product Management approach will continue to be incorporated into the organizational structure in 2019; with cross-functional teams assigned to product groups such as Membership and Registry products.

3.4.1.3 Staff retention and development

Continued professional development, with technical certification and leadership development prioritized. A staff conference will be held in 2019 with a focus on strategic planning for the 2020-2023 period.

Projects

3.4.1.4 Onboarding development

Onboarding processes will be extended to cover a more diverse and distributed workforce (including interns and community trainers) to improve knowledge and awareness of APNIC.

- Objectives
 - Review and update employee onboarding process to ensure that anyone who is engaged by the Secretariat understands APNIC's business and expected levels of responsibility and behaviour.
- Benefits to Members
 - Assurance of consistency and quality of service from all Secretariat appointments
 - Enables greater workforce flexibility to extend APNIC's service provision

3.4.2 Finance and Administration

Year	FTE	Expenses	CAPEX
2018	7.6	\$1,468,195	\$9,000
2019	6.8	\$1,508,088	\$9,500

Ongoing

3.4.2.1 Financial management

In 2019, APNIC's finance team is expected to pay in excess of 2,000 invoices, process 1,000 journals, settle over 430 expense claims, and reconcile more than 4,000 credit card transactions. APNIC will appoint a new external auditor in 2019 as per Executive Council policy that the auditor is rotated every five years. As APNIC's investment fund has expanded, costs related to managing the investment portfolio have increased slightly.

3.4.2.2 Office management

Management of office facilities and supplies, communications costs, postage/shipment, document management and collaboration tools, and general administrative tasks in 2019 is expected to remain the same as in 2018.

3.4.2.3 Travel management

Improvements to travel planning, quotations, booking, liaising with travel agencies and airlines, travel insurance and emergency support.

Projects

3.4.2.4 Enhancing member payment facilities

Provide efficient ways for account holders to pay their fees by increasing the number of payment options available.

- Objectives
 - Identify where account holders are experiencing difficulties in remitting funds to APNIC and make alternative payment methods available to ensure Members can pay easily from their own economy.
- Benefits to Members
 - Improved experience in the payment of APNIC invoices
 - Reduced cost and payment complexity for account holders

3.4.3 Legal and Governance

Year	FTE	Expenses	CAPEX
2018	0.4	\$585,122	-
2019	1.4	\$787,186	-

Ongoing

3.4.3.1 Legal counsel and business advisors

General legal advice, contract drafting and reviews, guidance in corporate governance, organizational risk management and contractual rights and obligations, and legal cooperation with other organizations is expected to increase in 2019. A full time legal officer will be recruited to cover increased legal work and to provide for backup for the Legal Counsel. A review of APNIC's practices and procedures around data collection to ensure ongoing compliance with privacy principles will also be undertaken.

3.4.3.2 Workplace health and safety

Management of health and safety awareness, and compliance training for health and safety officers, bullying and harassment prevention, online fraud awareness and equal employment opportunity.

3.4.4 Facilities

Year	FTE	Expenses	CAPEX
2018	1.7	\$646,319	\$90,000
2019	1.8	\$648,106	\$115,000

Ongoing

3.4.4.1 Building and office facilities

The cost of building management, utility equipment, interior fit-outs, office furniture, building security, repair and maintenance of APNIC's office in Brisbane will increase slightly in 2019.

4 2019 Budget Summary

4.1 Budget Summary

Activity	FTE	%	Expenses (AU\$)	%	CAPEX (AU\$)	%
Serving Members	49.2	59%	\$11,515,420	50%	\$483,411	55%
Customer Service	16.0		\$3,957,397		\$36,300	
Member Training	9.0		\$2,014,799		\$53,000	
Registration Services	10.4		\$1,940,109		-	
Technical Infrastructure	13.9		\$3,603,115		\$394,111	
Regional Development & Outreach	18.2	22%	\$5,151,144	22%	\$203,000	23%
APNIC Conferences	5.1		\$1,432,559		\$3,000	
APNIC Foundation	1.2		\$761,208		-	
Community Engagement	3.7		\$994,588		-	
Regional Technical Development	8.2		\$1,962,789		\$200,000	
Global Cooperation	4.8	6%	\$2,269,206	10%	\$60,000	7%
Global Research	0.9		\$714,191		\$60,000	
Global Technical Community	3.0		\$1,248,536		-	
Inter-governmental Outreach	0.8		\$306,479		-	
Corporate	11.9	14%	\$3,993,008	17%	\$128,000	15%
Facilities	1.8		\$648,106		\$115,000	
Finance & Administration	6.8		\$1,508,088		\$9,500	
Human Resource Management	2.0		\$1,049,628		\$3,500	
Legal & Governance	1.4		\$787,186		-	
Total	84.0		\$22,928,778		\$874,411	

Note: Some numbers presented in this table may not add up precisely to the totals provided due to rounding.

4.1 FTE Distribution

Activity	Total FTE	Bus	Comms	I&D	DG	HR	Srvcs	Prod Dev
Serving Members	49.2	6.1	2.0	16.3	1.7	0.1	9.9	13.1
Customer Service	16.0	3.7	1.8	0.9	1.2	-	4.4	4.0
Member Training	9.0	-	0.2	8.6	-	0.1	0.1	-
Registration Services	10.4	0.2	-	-	0.4	-	5.5	4.3
Technical Infrastructure	13.9	2.2	-	6.8	0.1	-	-	4.8
Regional Development & Outreach	18.2	1.2	5.6	3.5	2.3	0.1	2.8	2.7
APNIC Conferences	5.1	0.6	2.7	0.7	-	-	-	1.1
APNIC Foundation	1.2	0.6	0.3	0.2	-	0.1	-	-
Community Engagement	3.7	-	1.3	0.8	1.4	-	0.2	-
Regional Technical Development	8.2	-	1.3	1.8	0.9	-	2.6	1.6
Global Cooperation	4.8	0.2	0.4	0.3	2.6	-	0.3	1.0
Global Research	0.9	-	-	-	0.5	-	-	0.4
Global Technical Community	3.0	0.2	0.4	0.1	1.5	-	0.3	0.5
Inter-governmental Outreach	0.8	-	-	0.1	0.6	-	-	0.1
Corporate	11.9	8.5	-	-	1.4	1.8	-	0.2
Facilities	1.8	1.6	-	-	-	-	-	0.2
Finance & Administration	6.8	6.8	-	-	-	-	-	-
Human Resource Management	2.0	-	-	-	0.2	1.8	-	-
Legal & Governance	1.4	0.2	-	-	1.2	-	-	-
Total	84.0	16.0	8.0	20.0	8.0	2.0	13.0	17.0

Note: Some numbers presented in this table may not add up precisely to the totals provided due to rounding.

APNIC's 2019 Budget Submission provides more details on the 2019 APNIC Budget and is available with the Minutes of the December 2018 EC meeting.

Budget 2019

EC Retreat – December 2018

Budget Submission 2019

The proposed 2019 budget includes:

- Operational **expenditure** of AUD \$22,928,778 and
- **Revenue** of AUD \$23,173,579
- providing an operating **surplus** of AUD \$244,801 for 2019
- The **capital expenditure** requirements of AUD \$874,411

Preparation notes

The budget is developed on a zero-based methodology, and involves extensive consultation across the organization.

There are a range of key inputs that are included in the budget process, including:

- The 2018 APNIC Survey
- The 2019 APNIC Activity Plan
- 2019 priorities as established through the operational planning process
- The APNIC organization structure, HR cost analysis and recruitment plans
- Membership projections, derived from analysis of historical membership growth and recent trends
- Investment return forecasts provided by APNIC's investment advisors
- The asset register and quantity survey reports, which form the basis of depreciation and capital allowance forecast

Taxation Status

- APNIC's taxation status as a “Mutual Organisation” by way of a Private Ruling from the Australian Taxation Office was re-confirmed in November 2017 for five years ending June 2022

Revenue

REVENUE (AUD)	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	F'Cast 2018	Budget 2019	Change
Investment income	595,635	585,522	754,563	792,041	890,951	841,080	870,000	1,049,000	20.57%
IP Resource Application fee	2,232,250	1,420,625	1,323,250	-18,375					
Membership fees	14,361,213	15,074,781	15,903,111	16,933,413	18,354,898	19,310,962	20,208,000	20,959,575	3.72%
Non-members fees	227,966	240,225	254,706	243,049	243,923	260,010	253,115	258,112	1.97%
Reactivation fees	43,200	37,050	67,800	37,600	37,700	27,200	24,000	25,000	4.17%
Sign-Up fees				456,000	465,000	373,250	331,000	351,000	6.04%
Transfer fees	11,616	61,339	81,304	77,943	130,139	127,440	165,000	185,000	12.12%
Sundry income		2,812	4,265	3,612	1,587	13,570	419,000	187,000	-55.37%
Foundation Receipts							35,000	158,892	353.98%
TOTAL REVENUE	17,471,880	17,422,353	18,388,999	18,525,283	20,124,198	20,953,513	22,305,115	23,173,579	3.89%
		-0.28%	5.55%	0.74%	8.63%	4.12%	6.45%	3.89%	

Investment Income

- For the 2019 budget, Credit Suisse have advise a forecast of 3.42% for Investment returns
- APNIC maintains other Cash/term deposits, these funds are invested with an average return of around 2.5%
- We will continue to transfer excess funds from the operating account into the Investment Portfolio
 - As at the end of October the Investment fund balance is \$24.85M

Membership Fees

Member Tier	2010	2011	2012	2013	2014	2015	2016	2017	F'cst 2018	Budget 2019
Extra Large	16	21	20	20	21	22	22	23	23	23
Very Large	33	41	45	42	40	44	43	41	44	44
Large	141	145	144	147	142	137	138	138	140	140
Medium	324	378	402	392	402	431	449	473	485	485
Small	867	970	1114	1198	1388	2165	2643	2971	3368	3706
Very Small	637	817	1021	1294	1701	2336	2590	2769	2971	3269
Associate	503	575	788	957	924	133	109	132	126	126
Total	2521	2947	3534	4050	4618	5268	5994	6547	7157	7793
New	478	615	832	813	805	968	1048	849	820	828
Closed	163	189	245	297	237	318	322	296	210	192
Net Growth	315	426	587	516	568	650	726	553	610	636
Average Net Monthly Growth	26	36	49	43	47	54	61	46	51	53

- Based on analysis of recent trends, it is forecast that:
 - 828 new Members will join APNIC in 2019,
 - the forecast average annual fee a new Member is estimated at \$1,324 AUD which accounts for allocations from the last/8 and the IANA reclaimed pool, and for discounts applied to new Members from LDC's
 - Recent trends show around 30% of new members coming from LDC's
 - 192 account closures are expected in 2019
 - The average value of closed accounts is estimated at \$2,193
 - in 78% of cases, resources are returned to APNIC

Sensitivity Analysis – New Member Growth

The budget assumes new membership growth to be similar to recent trends, the tables below provide an analysis of the revenue impact if these estimates are not reflected in the actual membership trends in 2019.

Impact of Member Growth on Estimates (% Variation in Member Numbers)

Variation	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
+50%	104	104	104	104	104	104	104	104	104	104	104	104	1,242
+40%	97	97	97	97	97	97	97	97	97	97	97	97	1,159
+30%	90	90	90	90	90	90	90	90	90	90	90	90	1,076
+20%	83	83	83	83	83	83	83	83	83	83	83	83	994
+10%	76	76	76	76	76	76	76	76	76	76	76	76	911
Budget New Members #	69	69	69	69	69	69	69	69	69	69	69	69	828
-10%	62	62	62	62	62	62	62	62	62	62	62	62	745
-20%	55	55	55	55	55	55	55	55	55	55	55	55	662
-30%	48	48	48	48	48	48	48	48	48	48	48	48	580
-40%	41	41	41	41	41	41	41	41	41	41	41	41	497
-50%	35	35	35	35	35	35	35	35	35	35	35	35	414

Revenue Impact of variation to assumptions for Membership Growth on Membership Fees

Variation	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
+50%	\$ 3,807	\$ 7,613	\$ 11,420	\$ 15,226	\$ 19,033	\$ 22,839	\$ 26,646	\$ 30,452	\$ 34,259	\$ 38,065	\$ 41,872	\$ 45,678	\$ 296,907
+40%	\$ 3,045	\$ 6,090	\$ 9,136	\$ 12,181	\$ 15,226	\$ 18,271	\$ 21,316	\$ 24,362	\$ 27,407	\$ 30,452	\$ 33,497	\$ 36,542	\$ 237,526
+30%	\$ 2,284	\$ 4,568	\$ 6,852	\$ 9,136	\$ 11,420	\$ 13,703	\$ 15,987	\$ 18,271	\$ 20,555	\$ 22,839	\$ 25,123	\$ 27,407	\$ 178,144
+20%	\$ 1,523	\$ 3,045	\$ 4,568	\$ 6,090	\$ 7,613	\$ 9,136	\$ 10,658	\$ 12,181	\$ 13,703	\$ 15,226	\$ 16,749	\$ 18,271	\$ 118,763
+10%	\$ 761	\$ 1,523	\$ 2,284	\$ 3,045	\$ 3,807	\$ 4,568	\$ 5,329	\$ 6,090	\$ 6,852	\$ 7,613	\$ 8,374	\$ 9,136	\$ 59,381
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-10%	\$ (761)	\$ (1,523)	\$ (2,284)	\$ (3,045)	\$ (3,807)	\$ (4,568)	\$ (5,329)	\$ (6,090)	\$ (6,852)	\$ (7,613)	\$ (8,374)	\$ (9,136)	\$ (59,381)
-20%	\$ (1,523)	\$ (3,045)	\$ (4,568)	\$ (6,090)	\$ (7,613)	\$ (9,136)	\$ (10,658)	\$ (12,181)	\$ (13,703)	\$ (15,226)	\$ (16,749)	\$ (18,271)	\$ (118,763)
-30%	\$ (2,284)	\$ (4,568)	\$ (6,852)	\$ (9,136)	\$ (11,420)	\$ (13,703)	\$ (15,987)	\$ (18,271)	\$ (20,555)	\$ (22,839)	\$ (25,123)	\$ (27,407)	\$ (178,144)
-40%	\$ (3,045)	\$ (6,090)	\$ (9,136)	\$ (12,181)	\$ (15,226)	\$ (18,271)	\$ (21,316)	\$ (24,362)	\$ (27,407)	\$ (30,452)	\$ (33,497)	\$ (36,542)	\$ (237,526)
-50%	\$ (3,807)	\$ (7,613)	\$ (11,420)	\$ (15,226)	\$ (19,033)	\$ (22,839)	\$ (26,646)	\$ (30,452)	\$ (34,259)	\$ (38,065)	\$ (41,872)	\$ (45,678)	\$ (296,907)

Sensitivity Analysis – Membership Closures

The budget assumes membership closure in 2019 to be similar to recent trends, the tables below provide an analysis of the revenue impact if these estimates are not reflected in the actual membership trends in 2019.

Sensitivity of Member Closure Rates

Variation	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
-50%	8	8	8	8	8	8	8	8	8	8	8	8	96
-40%	10	10	10	10	10	10	10	10	10	10	10	10	115
-30%	11	11	11	11	11	11	11	11	11	11	11	11	134
-20%	13	13	13	13	13	13	13	13	13	13	13	13	154
-10%	14	14	14	14	14	14	14	14	14	14	14	14	173
Budget Closures #	16	16	16	16	16	16	16	16	16	16	16	16	192
+10%	18	18	18	18	18	18	18	18	18	18	18	18	211
+20%	19	19	19	19	19	19	19	19	19	19	19	19	230
+30%	21	21	21	21	21	21	21	21	21	21	21	21	250
+40%	22	22	22	22	22	22	22	22	22	22	22	22	269
+50%	24	24	24	24	24	24	24	24	24	24	24	24	288

Revenue Impact of change to Membership Fees due to variation in assumptions for account closures(\$)

Variation	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
-50%	\$ 883	\$ 1,765	\$ 2,648	\$ 3,531	\$ 4,413	\$ 5,296	\$ 6,179	\$ 7,061	\$ 7,944	\$ 8,827	\$ 9,709	\$ 10,592	\$ 68,848
-40%	\$ 706	\$ 1,412	\$ 2,118	\$ 2,825	\$ 3,531	\$ 4,237	\$ 4,943	\$ 5,649	\$ 6,355	\$ 7,061	\$ 7,767	\$ 8,474	\$ 55,078
-30%	\$ 530	\$ 1,059	\$ 1,589	\$ 2,118	\$ 2,648	\$ 3,178	\$ 3,707	\$ 4,237	\$ 4,766	\$ 5,296	\$ 5,826	\$ 6,355	\$ 41,309
-20%	\$ 353	\$ 706	\$ 1,059	\$ 1,412	\$ 1,765	\$ 2,118	\$ 2,471	\$ 2,825	\$ 3,178	\$ 3,531	\$ 3,884	\$ 4,237	\$ 27,539
-10%	\$ 177	\$ 353	\$ 530	\$ 706	\$ 883	\$ 1,059	\$ 1,236	\$ 1,412	\$ 1,589	\$ 1,765	\$ 1,942	\$ 2,118	\$ 13,770
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
+10%	\$ (177)	\$ (353)	\$ (530)	\$ (706)	\$ (883)	\$ (1,059)	\$ (1,236)	\$ (1,412)	\$ (1,589)	\$ (1,765)	\$ (1,942)	\$ (2,118)	\$ (13,770)
+20%	\$ (353)	\$ (706)	\$ (1,059)	\$ (1,412)	\$ (1,765)	\$ (2,118)	\$ (2,471)	\$ (2,825)	\$ (3,178)	\$ (3,531)	\$ (3,884)	\$ (4,237)	\$ (27,539)
+30%	\$ (530)	\$ (1,059)	\$ (1,589)	\$ (2,118)	\$ (2,648)	\$ (3,178)	\$ (3,707)	\$ (4,237)	\$ (4,766)	\$ (5,296)	\$ (5,826)	\$ (6,355)	\$ (41,309)
+40%	\$ (706)	\$ (1,412)	\$ (2,118)	\$ (2,825)	\$ (3,531)	\$ (4,237)	\$ (4,943)	\$ (5,649)	\$ (6,355)	\$ (7,061)	\$ (7,767)	\$ (8,474)	\$ (55,078)
+50%	\$ (883)	\$ (1,765)	\$ (2,648)	\$ (3,531)	\$ (4,413)	\$ (5,296)	\$ (6,179)	\$ (7,061)	\$ (7,944)	\$ (8,827)	\$ (9,709)	\$ (10,592)	\$ (68,848)

Sensitivity Analysis – Sign-Up Fees

The Sign-Up fee revenue is based on new income estimates seen in the previous slide, variations to new member growth impact revenue, as set out in the table below:

Revenue Impact of variation to assumptions for Membership growth on Sign Up Fees

Variation	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
+50%	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 175,500
+40%	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 140,400
+30%	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 105,300
+20%	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 70,200
+10%	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 35,100
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-10%	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (35,100)
-20%	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (70,200)
-30%	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (105,300)
-40%	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (140,400)
-50%	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (175,500)

The Sign-Up fee is \$500, discounted by 50% to new members from LDC's.

The Budget assumes 30% from LDC economies.

Other Income

Non-Member Fees

- Recent trends tracking similar to 2018

Transfer Fees

- Estimated as similar to increase slightly in 2019.

Reactivation fees

- In line with 2018

Sundry Income

- Meeting Registration Fees - Members/Non-Members similar to 2018
- Sponsorship will be significantly less, 2018 included a large sponsorship of \$249 k for APNIC46.
- External training Receipts – similar to 2018

Provision to recover \$159k for APNIC work supporting foundation activities

Expenses 2019

EXPENSES (AUD)	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	F'Cast 2018	Budget 2019	Change
Salaries and personnel expenses	8,145,433	8,298,111	8,731,164	9,586,575	10,459,153	11,096,470	11,945,000	12,993,111	8.77%
Travel expenses	1,822,239	1,937,230	1,955,471	1,961,551	2,085,745	2,161,034	2,100,000	2,099,000	-0.05%
Professional fees	939,882	1,246,373	1,052,757	1,195,494	1,409,430	1,304,343	1,650,000	1,673,800	1.44%
Computer expenses	551,362	548,748	572,528	520,784	533,628	647,453	827,000	1,050,390	27.01%
Depreciation expense	816,998	753,032	765,548	764,145	785,218	807,596	850,000	841,892	-0.95%
Sponsorship and Publicity expenses	270,696	319,623	340,946	575,775	624,179	681,342	820,000	828,350	1.02%
Contribution to APNIC Foundation					18,003	665,058	690,000	746,208	8.15%
Communication expenses	440,762	490,600	483,803	591,885	532,212	561,271	540,238	599,524	10.97%
Meeting and training expenses	191,561	332,819	374,850	350,313	363,343	389,922	435,000	466,550	7.25%
Office Operating expenses	249,930	300,757	312,744	315,608	324,948	337,207	352,242	353,235	0.28%
Staff training/ Conference expenses	151,386	163,053	135,996	169,122	164,441	148,603	162,500	301,500	85.54%
ICANN contract fee	321,655	136,732	260,333	284,161	243,026	244,657	278,866	260,000	-6.77%
Bank service fees	132,080	138,337	145,823	156,496	167,917	177,670	194,000	203,000	4.64%
Insurance expense	126,673	126,751	129,971	131,550	128,793	173,610	189,738	192,500	1.46%
Recruitment expense	99,574	89,472	144,423	119,077	94,307	134,793	200,000	120,000	-40.00%
Membership fees	68,392	48,294	55,611	49,532	48,971	52,296	49,222	54,218	10.15%
Postage & delivery	28,493	45,269	22,071	51,029	41,893	40,610	43,500	48,500	11.49%
Printing & photocopy	38,115	36,586	48,508	33,807	38,165	29,311	35,000	39,500	12.86%
Doubtful debt expenses	27,099	30,990	34,259	-54,293	-6,225	14,653	25,000	25,000	
Translation expenses	11,928	15,255	1,623	2,883	11,147	9,027	8,500	22,500	164.71%
Rent and Outgoings	-12,562							10,000	
Tax expenses	-17,506	-96,166	-34,609	12,777	-18,217	-82,284			
TOTAL EXPENSES	14,404,193	14,585,138	15,533,822	16,818,270	18,050,078	19,594,644	21,395,806	22,928,778	7.16%
		1.3%	6.5%	8.3%	7.3%	8.6%	9.2%	7.2%	

Expenses – Salary & Wages

Salary and wages will increase by 8.8% in 2019 when compared to the forecast expenditure for the 2018 year. The assumptions included in this budget are:

- Employee superannuation contributions will remain at 9.5%
- All permanent staff will take 3.5 weeks of annual leave
- The overall allowance for salary increases resulting from role changes and annual performance reviews will be set at 3.5%
- Existing headcount commitments continue from 2018 with the provision made for the recruitment of a **legal officer(July)** and a **new training** position to support foundation activities.
- As in 2018, two APNIC staff will be seconded to the APNIC foundation, their costs are included in the expense; Contribution to APNIC foundation.

Expenses – Travel

APNIC's travel expenses will not increase in 2019.

- This category includes travel for; APNIC Staff, APNIC EC, NRO AC, Support for SIG Chairs.
- Travel expenses include all corporate travel management fees and International SOS membership, which provides advice and emergency assistance for those travelling on APNIC business.

Expenses – Professional Fees

Professional Fees will increase by 1.4%, the major contributor is the APNIC Academy. Details of the major for 2019 expenses are:

• Labs consultancy (3.3.3)	192,000
• CRM Consultant Fees (3.1.2.9)	180,000
• Investment Consultant Service (3.4.2.1)	147,000
• Legal Advice & Expenses (3.4.3.1)	140,000
• Non-staff trainers (3.1.4.2)	120,000
• Design Consultancy (3.1.2)	120,000
• HR Consulting Fees (3.4.1)	100,000
• External Consultant Technical Assistance (3.1.4.3)	60,000
• Benchmarking consultancy (3.1.2.1)	50,000
• Outsourced Content Development (F2F & Online) (3.1.4.4)	50,000
• Non-staff trainers' travels (3.1.4.2)	50,000

Expenses – Computer Expenses

- Computer expenses include all non-capital purchases of equipment, consumables, license and support fees for hardware and software. There are several costs related to work already commenced which contribute to the increase in 2019. Major expenses in 2019 are:

• NetSuite ERP Licenses (3.1.3.4)	120,000
• Cloud Computing Expenses (3.3.3.1)	100,000
• Salesforce Licence Expenses (3.1.2.9)	86,000
• APNIC Academy - Virtual Labs (3.1.4.4)	75,000
• Firewall & Intrusion detection/prevention (3.1.3.2)	57,240
• F5 BIG-IP Support and maintenance (3.1.3.2)	50,000
• APNIC Academy - Third-party Course Content (3.1.4.4)	50,000
• Pardot Licence Expenses (3.1.2.9)	39,000
• VMware licenses (3.1.3.2)	30,000
• Nexonia Expense Reporting (3.1.3.4)	25,000
• Hardware maintenance support (3.1.3.2)	23,000
• Maintenance contract - DNSSEC signers (3.1.3.2)	20,000

Expenses – Depreciation

Depreciation expenses are budgeted based on analysis of the existing depreciation and capital allowance schedules; including anticipated depreciation based on Capital Expenditure planned for 2019.

The amounts budgeted for 2019 are:

- | | |
|--|---------|
| • Equipment depreciation (3.1.3.2) | 680,460 |
| • Capital works allowances (6 Cordelia St) (3.4.4.1) | 161,432 |

Expenses – Sponsorship & Publicity

Sponsorship and Publicity expenses include APNIC contributions to the NRO expenses, the ISIF program, and sponsorship of NOG's and other community events. Major expenses in 2019 include:

• NRO Expenses APNIC Contribution (3.3.1.1)	176,000
• Regional technical development NOG sponsorships (3.2.2.3)	120,000
• APNIC contribution to ISIF grants pool (3.2.4.2)	100,000
• Google PPC Advertising - member outreach (3.1.2.5)	80,000
• Regional community development sponsorships (3.2.3.1)	65,000
• Research grants on technical issues (3.2.4.2)	60,000
• APNIC conference fellowships (3.2.2.2)	60,000
• Regional security sponsorships (3.2.2.4)	40,000
• Regional/national IGFs sponsorship (3.2.3.5)	40,000
• General promotional items (3.1.2.1, 3.2.1.1)	20,000

Expenses - Communication

Communication expenses include data network expenses, Internet connectivity expenses, telephony and mobile phone expenses.

The major contributors to costs here are the ongoing cost of the dark fibre network and the cost of rack-space in the co-locations that are critical to APNIC's network resilience. The major costs included in the 2019 budget include the following:

• Rack hire, power, cross connect (3.1.3.1)	105,024
• Interactive Datacentre rack hire (3.1.3.1)	58,000
• AU switch, router, Wi-Fi, VPN Smartnet (3.1.3.1)	57,000
• Peering: 250Mbps PIPE/TPG Transit & Peer (3.1.3.1)	50,000
• Comscentre VoIP hosting service (3.1.3.4)	45,000
• Dark Fibre: Office-EMP (Eight Mile Plains) (3.1.3.1)	42,000
• Netnod anycast secondary DNS hosting (3.1.3.1)	30,000
• Megaport, PCCW connection to SG, HK and Japan (3.1.3.1)	30,000
• Anycast Global load balancing - RDAP & whois (3.1.3.1)	25,000
• Cloud compute Engine (Google, Amazon) (3.1.3.5)	20,000
• Vocus dark fibre and peering (Equinix) (3.1.3.1)	18,360
• AU Peering: AARNET transit and Eduroam service (3.1.3.1)	17,000
• Server hosting - DNS Anycast (3.1.3.1)	16,800
• Server hosting - Whois and RDAP (3.1.3.1)	15,000
• External backup storage (3.1.3.1)	15,000

Expenses – APNIC Foundation

APNIC will underwrite Foundation costs up to a maximum of \$746,208 in 2019. Included in this amount is the costs for the two APNIC staff seconded to the Foundation and recovery of other internal resource costs.

	Budget 2017	FY 2017 in USD	FY 2017	Budget 2018	Forecast 2018	Budget 2019	Budget vs Forecast Var	Variance %
Operating Contribution Received - APNIC	720,281	USD 517,641.82	665,088	700,683	690,000	746,208	56,208	8%
Contribution Received - Grants	0	USD 5,490.81	7,055	145,000	601,348	619,000	17,652	3%
Interest Income	0	USD 47.25	61	0	139	0	(139)	-100%
TOTAL REVENUE	720,281	USD 523,179.88	672,173	845,683	1,291,487	1,365,208	73,721	6%
EXPENSES								
Grant Expenses		USD 5,490.82	7,055	145,000	601,348	619,000	17,652	3%
Other Expenses		(USD 5,685.53)	(7,176)	0	0	0	0	0%
Operating Expenses								
Bank Service Fees	350	USD 117.46	151	500	1,020	1,000	(20)	-2%
Communication Expenses	5,000	USD 0.00	0	3,000	2,502	3,000	498	20%
Computer Expenses	5,000	USD 500.97	644	1,000	3,813	5,000	1,187	31%
Depreciation Expense	2,640	USD 545.79	701	0	0	0	0	0%
Meeting and Training Expenses	1,500	USD 2,393.75	3,075	1,500	0	0	0	0%
Personnel Support Expenses	512,481	USD 361,950.86	465,029	532,873	502,628	572,808	70,180	14%
Postage & Delivery	250	USD 0.00	0	250	234	500	266	114%
Printing & Photocopy	5,000	USD 0.00	0	1,000	0	1,000	1,000	0%
Professional Fees	30,000	USD 65,202.53	83,771	40,000	24,446	40,000	15,554	64%
Recruitment Expense	5,000	USD 0.00	0	2,000	0	1,500	1,500	0%
Staff Training Expense	5,000	USD 980.50	1,260	2,000	0	2,000	2,000	0%
Translation Expense	2,500	USD 0.00	0	1,000	1,126	1,000	(126)	-11%
Travel Expenses	145,560	USD 86,067.46	110,578	115,560	154,371	118,400	(35,971)	-23%
TOTAL EXPENSES	720,281	USD 517,664.61	665,087	845,683	1,291,487	1,365,208	73,721	6%
OPERATING SURPLUS/(DEFICIT)	0	USD 5,515.27	7,086	0	0	0	-0	0%

1/1/2018

REVENUE and EXPENSES (AUD)	Budget 2017	FY 2017 in USD	FY 2017	Budget 2018	Forecast 2018	Budget 2019	Budget vs Forecast Var	Variance %
Total Revenue	720,281	USD 523,179.88	672,173	845,683	1,291,487	1,365,208	73,721	6%
Total Expenses	720,281	USD 517,664.61	665,087	845,683	1,291,487	1,365,208	73,721	6%
OPERATING SURPLUS/(DEFICIT)	0	USD 5,515.27	7,086	0	0	0	-0	0%

Expenses - Meeting & Training

The major contributors to this expense are the APNIC conferences in 2019 in Daejeon, South Korea and Chiang Mai, Thailand. Major provisions included in the 2019 budget are:

• APNIC 48 Conference week - main plenary (3.2.1.1)	60,000
• APNIC 48 Conference AV rental (3.2.1.1)	40,000
• End of year and mid-year Staff Events (3.4.1.3)	32,500
• Training support (venue and catering costs) (3.1.4.1)	30,000
• APNIC 47 (APRICOT Closing Reception) (3.2.1.1)	30,000
• APNIC 48 Workshop week – catering (3.2.1.1)	25,000
• APNIC 48 Conference closing dinner (3.2.1.1)	25,000
• APNIC 48 Opening reception (3.2.1.1)	24,000
• Staff Entertainment annual (3.4.1.3)	18,000
• APNIC 47 AV-Webcast Equipment Rental (3.2.1.1)	18,000
• Services outreach exhibition (3.2.1.1)	15,000
• APNIC 48 Conference week - venue hire (3.2.1.1)	15,000
• APNIC 48 Workshop week - venue hire (3.2.1.1)	14,500
• APNIC 47 Conference Package (3.2.1.1)	12,000
• 6 Member gatherings (3.1.2.5)	11,000
• APNIC 48 Conference signage (3.2.1.1)	10,000

Expenses - Office Operating

The major costs in this item include electricity, land tax, council and water rates, cleaning and rubbish removal, air-conditioning and security. Major expenditure for 2019 includes:

• Cordelia Street – Electricity (3.4.4.1)	60,000
• Land Tax (3.4.4.1)	56,900
• Kitchen Supply and Catering Expense (3.4.4.1)	52,500
• Office Cleaning (3.4.4.1)	45,000
• BCC Rates (3.4.4.1)	36,000
• WHS Support t(3.4.3.2)	12,000
• General Maintenance and repairs (3.4.4.1)	10,000
• Rubbish removal (3.4.4.1)	9,000
• Office building A/C service monthly (3.4.4.1)	7,560
• Health Checks (3.4.3.2)	7,500
• Water Rates (3.4.4.1)	6,500
• Plant Hire (3.4.4.1)	6,000
• Stationery Supplies (3.4.4.1)	5,000
• Electrical repair & testing (3.4.4.1)	5,000

Capital Expenditure 2019

- Capital expenditure comprises equipment & software and office equipment
 - For the 2019 budget submission, the capital expenditure provision for 2018 is \$874,411

CAPITAL (AUD)	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	F'Cast 2018	Budget 2019	Change
Equipment & Software	337,479	661,095	662,698	671,551	809,626	572,206	575,000	759,411	32.07%
Office Furniture & Fittings	60,664	89,911	31,278	36,371	12,136	110,211	115,000	115,000	
Total - Capital Expenditure	398,143	751,006	693,976	707,922	821,762	682,417	690,000	874,411	26.73%

Capital Expenditure 2019

Major items in Equipment & Software include:

• Router/switches with 10Gb ports- peering & cloud internet connections (3.1.3.1)	205,112
• New IXP Development X 4 (3.2.2.2)	200,000
• Dell blade cache for virtual machine performance, server replacement (3.1.3.1)	65,000
• New compute server, switches, sundries – Research (3.3.3.1)	60,000
• 2 x Network switch - APNIC office. Additional network switch (3.1.3.1)	29,000
• Openflow Switches - Openflow lab content - SDN workshop (3.1.4.1)	25,000
• Office WIFI controller replacement (3.1.3.1)	20,432
• Firewalls to enhance lab of security workshop (3.1.4.1)	20,000
• Conference/Spare laptops (5x replacements) (3.1.3.4)	15,000
• Remote controlled webcast cameras. Cameras for webcasting. (3.1.3.1)	14,400
• New headsets for MS and RS (3.1.2.1)	7,800
• Wireless access points and Wifi Monitoring Tool (3.1.2.1)	6,800
• Office Machines - printers, TVs, etc. (3.4.4.1)	6,000
• Staff monitor due for replacement (3.1.3.1)	6,000
• 15 WIFI Controller licenses for conference (3.1.3.1)	5,619

Capital Expenditure 2019

Major items in Office furniture & Fittings include:

- New Bathroom facilities on L2
- Upgrade storage space in Basement
- General provisions to upgrade facilities as required.

APNIC Budget 2019 - Draft

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1 Executive Summary

This document contains the APNIC budget submission for the financial year from January to December 2019. The budget submission includes revenue, expense, and capital expenditure projections based on the planned activities for the APNIC Secretariat for 2019.

The purpose of this paper is to allow the APNIC Executive Council to approve an expenditure level for 2019, in the manner as described in the APNIC By-laws:

“to establish the basis for the budget of APNIC and determine, in the light of the decisions taken by the Members on the reports referred to in by-law 5(b) above, a ceiling for the expenditure of APNIC until the next AGM after considering all relevant aspects of the work of APNIC in that period” [APNIC By-laws 30 (g)]

The proposed budget includes operational expenditure of AUD \$22,928,778 and projected revenue of AUD \$23,173,579 providing an operating surplus of AUD \$244,801 for 2019. The capital expenditure requirements for 2019 are AUD \$874,411. All values in this document are expressed in Australian Dollars (AUD) unless otherwise indicated.

2 Budget Summary

The 2019 budget for revenue, expenses, and capital expenditure are included in the table below:

REVENUE (AUD)	FY 2017	F'Cast 2018	Budget 2019	Change
Investment income	841,080	870,000	1,049,000	20.57%
Membership fees	19,310,962	20,208,000	20,959,575	3.72%
Non-members fees	260,010	253,115	258,112	1.97%
Reactivation fees	27,200	24,000	25,000	4.17%
Sign-Up fees	373,250	331,000	351,000	6.04%
Transfer fees	127,440	165,000	185,000	12.12%
Sundry income	13,570	419,000	187,000	-55.37%
Foundation Receipts		35,000	158,892	353.98%
TOTAL REVENUE	20,953,513	22,305,115	23,173,579	3.89%
	4.12%	6.45%	3.89%	
EXPENSES (AUD)	FY 2017	F'Cast 2018	Budget 2019	Change
Bank service fees	177,670	194,000	203,000	4.64%
Communication expenses	561,271	540,238	599,524	10.97%
Computer expenses	647,453	827,000	1,050,390	27.01%
Contribution to APNIC Foundation	665,058	690,000	746,208	8.15%
Depreciation expense	807,596	850,000	841,892	-0.95%
Doubtful debt expenses	14,653	25,000	25,000	
ICANN contract fee	244,657	278,866	260,000	-6.77%
Insurance expense	173,610	189,738	192,500	1.46%
Meeting and training expenses	389,922	435,000	466,550	7.25%
Membership fees	52,296	49,222	54,218	10.15%
Office Operating expenses	337,207	352,242	353,235	0.28%
Postage & delivery	40,610	43,500	48,500	11.49%
Printing & photocopy	29,311	35,000	39,500	12.86%
Professional fees	1,304,343	1,650,000	1,673,800	1.44%
Recruitment expense	134,793	200,000	120,000	-40.00%
Rent and Outgoings			10,000	
Salaries and personnel expenses	11,096,470	11,945,000	12,993,111	8.77%
Sponsorship and Publicity expenses	681,342	820,000	828,350	1.02%
Staff training/ Conference expenses	148,603	162,500	301,500	85.54%
Tax expenses	-82,284			
Translation expenses	9,027	8,500	22,500	164.71%
Travel expenses	2,161,034	2,100,000	2,099,000	-0.05%
TOTAL EXPENSES	19,594,644	21,395,806	22,928,778	7.16%
	8.6%	9.2%	7.2%	
REVENUE and EXPENSES (AUD)	FY 2017	F'Cast 2018	Budget 2019	Change
Total Revenue	20,953,513	22,305,115	23,173,579	3.89%
Total Expenses	19,594,644	21,395,806	22,928,778	7.16%
OPERATING SURPLUS/(DEFICIT)	1,358,869	909,309	244,801	-73.08%
CAPITAL (AUD)	FY 2017	F'Cast 2018	Budget 2019	Change
Equipment & Software	572,206	575,000	759,411	32.07%
Office Furniture & Fittings	110,211	115,000	115,000	
Total - Capital Expenditure	682,417	690,000	874,411	26.73%

Table 2.1 2019 Budget summary

3 Budget Preparation Notes

The budget is developed on a zero-based methodology and involves extensive consultation across the organization.

There are a range of key inputs that are included in the budget process, including:

- The 2018 APNIC Survey
- The 2019 APNIC Activity Plan
- 2019 priorities as established through the operational planning process
- The APNIC organization structure, HR cost analysis and recruitment plans
- Membership projections, derived from analysis of historical membership growth and recent trends
- Investment return forecasts provided by APNIC's investment advisors
- The asset register and quantity survey reports, which form the basis of depreciation and capital allowance forecast

3.1 Projection techniques

Projections for membership fees are calculated by analysing recent trends in membership activity. 2019 membership revenues budgets are calculated based on the current (2015) fee schedule. A linear projection of membership growth and account closure is used to estimate the incremental growth in revenue for membership fees in 2019.

Interest income is based on analysis of APNIC's existing cash deposits and the contracted rates and maturity dates for fixed deposits. Estimates of interest from the current account are based on current returns. Investment income predictions are based on forecasts provided by APNIC's investment managers across the range of investment categories set out in APNIC's Investment Policy.

The ERP system allows for the verification of all current approved spending commitments. This data is combined with new planned expenditure in 2019.

An overall inflation rate of 1.9% (1.2% excluding volatile items) was recorded for the 12 months ending September 2019 and this has been used in projecting costs in this submission.

3.2 APNIC's Taxation Status

APNIC's taxation status as a "Mutual Organisation" by way of a Private Ruling from the Australian Taxation Office was re-confirmed in November 2017 for a further five years ending June 2022.

4 Revenue

The table below tracks APNIC's revenue from 2012 through to the forecast for 2018 and the budget submission for 2019.

REVENUE (AUD)	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	F'Cast 2018	Budget 2019	Change
Investment income	595,635	585,522	754,563	792,041	890,951	841,080	870,000	1,049,000	20.57%
IP Resource Application fee	2,232,250	1,420,625	1,323,250	-18,375					
Membership fees	14,361,213	15,074,781	15,903,111	16,933,413	18,354,898	19,310,962	20,208,000	20,959,575	3.72%
Non-members fees	227,966	240,225	254,706	243,049	243,923	260,010	253,115	258,112	1.97%
Reactivation fees	43,200	37,050	67,800	37,600	37,700	27,200	24,000	25,000	4.17%
Sign-Up fees				456,000	465,000	373,250	331,000	351,000	6.04%
Transfer fees	11,616	61,339	81,304	77,943	130,139	127,440	165,000	185,000	12.12%
Sundry income		2,812	4,265	3,612	1,587	13,570	419,000	187,000	-55.37%
Foundation Receipts							35,000	158,892	353.98%
TOTAL REVENUE	17,471,880	17,422,353	18,388,999	18,525,283	20,124,198	20,953,513	22,305,115	23,173,579	3.89%
		-0.28%	5.55%	0.74%	8.63%	4.12%	6.45%	3.89%	

Table 4.1 Revenue over time

4.1 Investment Income

The value APNIC's investments continue to increase as excess funds are transferred from the operating account to the Investment Fund and investment returns are reinvested in line with the Investment Policy. APNIC's investment advisors have forecast a yield of 3.42% in 2019. Interest on cash deposits not held in the fund are forecast to achieve 2.5% in 2019.

4.2 Membership Fees

4.2.1 Membership growth

APNIC's membership growth continues and the 2019 Budget assumes a linear continuation of membership growth. The 2019 budget was developed based on the modelling of the recent membership trends. The table below shows membership growth since 2010.

Member Tier	2010	2011	2012	2013	2014	2015	2016	2017	F'cst 2018	Budget 2019
Extra Large	16	21	20	20	21	22	22	23	23	23
Very Large	33	41	45	42	40	44	43	41	44	44
Large	141	145	144	147	142	137	138	138	140	140
Medium	324	378	402	392	402	431	449	473	485	485
Small	867	970	1114	1198	1388	2165	2643	2971	3368	3706
Very Small	637	817	1021	1294	1701	2336	2590	2769	2971	3269
Associate	503	575	788	957	924	133	109	132	126	126
Total	2521	2947	3534	4050	4618	5268	5994	6547	7157	7793
New	478	615	832	813	805	968	1048	849	820	828
Closed	163	189	245	297	237	318	322	296	210	192
Net Growth	315	426	587	516	568	650	726	553	610	636
Average Net Monthly Growth	26	36	49	43	47	54	61	46	51	53

Table 4.2 Membership growth over time

4.2.2 Membership fee revenue – sensitivity analysis

The table below illustrates the potential impact on membership revenue if the actual growth of membership in 2019 varies from the assumptions included in the budget. The average annual fee a new Member will pay is estimated at \$1,324 which accounts for allocations from the last /8 and the IANA reclaimed pool, and for discounts applied to new Members from LDC's, recent trends show 30% of new members are in LDC economies.

Impact of Member Growth on Estimates (% Variation in Member Numbers)													
Variation	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
+50%	104	104	104	104	104	104	104	104	104	104	104	104	1,242
+40%	97	97	97	97	97	97	97	97	97	97	97	97	1,159
+30%	90	90	90	90	90	90	90	90	90	90	90	90	1,076
+20%	83	83	83	83	83	83	83	83	83	83	83	83	994
+10%	76	76	76	76	76	76	76	76	76	76	76	76	911
Budget New Members #	69	69	69	69	69	69	69	69	69	69	69	69	828
-10%	62	62	62	62	62	62	62	62	62	62	62	62	745
-20%	55	55	55	55	55	55	55	55	55	55	55	55	662
-30%	48	48	48	48	48	48	48	48	48	48	48	48	580
-40%	41	41	41	41	41	41	41	41	41	41	41	41	497
-50%	35	35	35	35	35	35	35	35	35	35	35	35	414

Revenue Impact of variation to assumptions for Membership Growth on Membership Fees													
Variation	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
+50%	\$ 3,807	\$ 7,613	\$ 11,420	\$ 15,226	\$ 19,033	\$ 22,839	\$ 26,646	\$ 30,452	\$ 34,259	\$ 38,065	\$ 41,872	\$ 45,678	\$ 296,907
+40%	\$ 3,045	\$ 6,090	\$ 9,136	\$ 12,181	\$ 15,226	\$ 18,271	\$ 21,316	\$ 24,362	\$ 27,407	\$ 30,452	\$ 33,497	\$ 36,542	\$ 237,526
+30%	\$ 2,284	\$ 4,568	\$ 6,852	\$ 9,136	\$ 11,420	\$ 13,703	\$ 15,987	\$ 18,271	\$ 20,555	\$ 22,839	\$ 25,123	\$ 27,407	\$ 178,144
+20%	\$ 1,523	\$ 3,045	\$ 4,568	\$ 6,090	\$ 7,613	\$ 9,136	\$ 10,658	\$ 12,181	\$ 13,703	\$ 15,226	\$ 16,749	\$ 18,271	\$ 118,763
+10%	\$ 761	\$ 1,523	\$ 2,284	\$ 3,045	\$ 3,807	\$ 4,568	\$ 5,329	\$ 6,090	\$ 6,852	\$ 7,613	\$ 8,374	\$ 9,136	\$ 59,381
-10%	\$ (761)	\$ (1,523)	\$ (2,284)	\$ (3,045)	\$ (3,807)	\$ (4,568)	\$ (5,329)	\$ (6,090)	\$ (6,852)	\$ (7,613)	\$ (8,374)	\$ (9,136)	\$ (59,381)
-20%	\$ (1,523)	\$ (3,045)	\$ (4,568)	\$ (6,090)	\$ (7,613)	\$ (9,136)	\$ (10,658)	\$ (12,181)	\$ (13,703)	\$ (15,226)	\$ (16,749)	\$ (18,271)	\$ (118,763)
-30%	\$ (2,284)	\$ (4,568)	\$ (6,852)	\$ (9,136)	\$ (11,420)	\$ (13,703)	\$ (15,987)	\$ (18,271)	\$ (20,555)	\$ (22,839)	\$ (25,123)	\$ (27,407)	\$ (178,144)
-40%	\$ (3,045)	\$ (6,090)	\$ (9,136)	\$ (12,181)	\$ (15,226)	\$ (18,271)	\$ (21,316)	\$ (24,362)	\$ (27,407)	\$ (30,452)	\$ (33,497)	\$ (36,542)	\$ (237,526)
-50%	\$ (3,807)	\$ (7,613)	\$ (11,420)	\$ (15,226)	\$ (19,033)	\$ (22,839)	\$ (26,646)	\$ (30,452)	\$ (34,259)	\$ (38,065)	\$ (41,872)	\$ (45,678)	\$ (296,907)

Table 4.3 Sensitivity analysis – membership growth

Based on analysis of recent trends, it is forecast that 828 new Members will join APNIC in 2019, the average value of closed accounts is estimated at \$2,193 and 16 account closures are expected each month, in 78% of cases, resources are returned to APNIC. The table below illustrates the impact on Membership revenue if the actual number of membership closures in 2019 varies from the assumptions included in the budget.

Sensitivity of Member Closure Rates													
Variation	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
-50%	8	8	8	8	8	8	8	8	8	8	8	8	96
-40%	10	10	10	10	10	10	10	10	10	10	10	10	115
-30%	11	11	11	11	11	11	11	11	11	11	11	11	134
-20%	13	13	13	13	13	13	13	13	13	13	13	13	154
-10%	14	14	14	14	14	14	14	14	14	14	14	14	173
Budget Closures #	16	16	16	16	16	16	16	16	16	16	16	16	192
+10%	18	18	18	18	18	18	18	18	18	18	18	18	211
+20%	19	19	19	19	19	19	19	19	19	19	19	19	230
+30%	21	21	21	21	21	21	21	21	21	21	21	21	250
+40%	22	22	22	22	22	22	22	22	22	22	22	22	269
+50%	24	24	24	24	24	24	24	24	24	24	24	24	288

Revenue Impact of change to Membership Fees due to variation in assumptions for account closures(\$)													
Variation	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
-50%	\$ 883	\$ 1,765	\$ 2,648	\$ 3,531	\$ 4,413	\$ 5,296	\$ 6,179	\$ 7,061	\$ 7,944	\$ 8,827	\$ 9,709	\$ 10,592	\$ 68,848
-40%	\$ 706	\$ 1,412	\$ 2,118	\$ 2,825	\$ 3,531	\$ 4,237	\$ 4,943	\$ 5,649	\$ 6,355	\$ 7,061	\$ 7,767	\$ 8,474	\$ 55,078
-30%	\$ 530	\$ 1,059	\$ 1,589	\$ 2,118	\$ 2,648	\$ 3,178	\$ 3,707	\$ 4,237	\$ 4,766	\$ 5,296	\$ 5,826	\$ 6,355	\$ 41,309
-20%	\$ 353	\$ 706	\$ 1,059	\$ 1,412	\$ 1,765	\$ 2,118	\$ 2,471	\$ 2,825	\$ 3,178	\$ 3,531	\$ 3,884	\$ 4,237	\$ 27,539
-10%	\$ 177	\$ 353	\$ 530	\$ 706	\$ 883	\$ 1,059	\$ 1,236	\$ 1,412	\$ 1,589	\$ 1,765	\$ 1,942	\$ 2,118	\$ 13,770
+10%	\$ (177)	\$ (353)	\$ (530)	\$ (706)	\$ (883)	\$ (1,059)	\$ (1,236)	\$ (1,412)	\$ (1,589)	\$ (1,765)	\$ (1,942)	\$ (2,118)	\$ (13,770)
+20%	\$ (353)	\$ (706)	\$ (1,059)	\$ (1,412)	\$ (1,765)	\$ (2,118)	\$ (2,471)	\$ (2,825)	\$ (3,178)	\$ (3,531)	\$ (3,884)	\$ (4,237)	\$ (27,539)
+30%	\$ (530)	\$ (1,059)	\$ (1,589)	\$ (2,118)	\$ (2,648)	\$ (3,178)	\$ (3,707)	\$ (4,237)	\$ (4,766)	\$ (5,296)	\$ (5,826)	\$ (6,355)	\$ (41,309)
+40%	\$ (706)	\$ (1,412)	\$ (2,118)	\$ (2,825)	\$ (3,531)	\$ (4,237)	\$ (4,943)	\$ (5,649)	\$ (6,355)	\$ (7,061)	\$ (7,767)	\$ (8,474)	\$ (55,078)
+50%	\$ (883)	\$ (1,765)	\$ (2,648)	\$ (3,531)	\$ (4,413)	\$ (5,296)	\$ (6,179)	\$ (7,061)	\$ (7,944)	\$ (8,827)	\$ (9,709)	\$ (10,592)	\$ (68,848)

Table 4.4 Sensitivity analysis – membership closures

4.3 Non-Members Fees

Fees from Non-Member account holders continue to be very stable and it is anticipated that in 2019 that there will be minimal change to this revenue for this item.

4.4 Reactivation Fees

Reactivation Fees are charged to Members to reactivate their accounts after closure. The revenue for this item is expected to be in line with 2018.

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4.5 Sign-Up Fees

Sign-Up fees are directly related to membership growth as outlined in table 4.2 above. The fee is \$500 and is discounted by 50% for LDC economies currently making up 30% of new members. The effect of a variance to the budget assumptions for membership Growth for this revenue item is set out in the table below:

Revenue Impact of variation to assumptions for Membership growth on Sign Up Fees

Variation	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
+50%	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625	\$ 175,500
+40%	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 140,400
+30%	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 8,775	\$ 105,300
+20%	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 5,850	\$ 70,200
+10%	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 2,925	\$ 35,100
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-10%	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (2,925)	\$ (35,100)
-20%	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (5,850)	\$ (70,200)
-30%	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (8,775)	\$ (105,300)
-40%	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (11,700)	\$ (140,400)
-50%	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (14,625)	\$ (175,500)

Table 4.5 Sensitivity analysis – Sign-Up fees

4.6 Transfer Fees

The revenue from transfer fees is estimated as similar to the actuals achieved in 2018.

4.7 Sundry Income

Sundry income includes revenue for sources such as:

- Meeting receipt registration – Members/Non-Members
- Meeting receipt – Sponsorship
- External training receipts - Members/Non-Members
- Recovery of APNIC staff costs and travel for work undertaken for foundation activities

Meeting Sponsorship will be lower, 2018 included significant sponsorship for the Noumea meeting which will not be achieved in 2019.

4.8 Foreign Exchange Gains/Losses

The budget for exchange rate variances has been set as zero; it is not possible to forecast the total gain or loss on APNIC transactions. APNIC has a low exposure to currency variations as all fees from members and the majority of expenses in running APNIC's operations are paid in Australian dollars.

5 Expenses

The tables below set out APNIC's expenses since 2012, with commentary on the major expenses is included below:

EXPENSES (AUD)	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	F'Cast 2018	Budget 2019	Change
Salaries and personnel expenses	8,145,433	8,298,111	8,731,164	9,586,575	10,459,153	11,096,470	11,945,000	12,993,111	8.77%
Travel expenses	1,822,239	1,937,230	1,955,471	1,961,551	2,085,745	2,161,034	2,100,000	2,099,000	-0.05%
Professional fees	939,882	1,246,373	1,052,757	1,195,494	1,409,430	1,304,343	1,650,000	1,673,800	1.44%
Computer expenses	551,362	548,748	572,528	520,784	533,628	647,453	827,000	1,050,390	27.01%
Depreciation expense	816,998	753,032	765,548	764,145	785,218	807,596	850,000	841,892	-0.95%
Sponsorship and Publicity expenses	270,696	319,623	340,946	575,775	624,179	681,342	820,000	828,350	1.02%
Contribution to APNIC Foundation					18,003	665,058	690,000	746,208	8.15%
Communication expenses	440,762	490,600	483,803	591,885	532,212	561,271	540,238	599,524	10.97%
Meeting and training expenses	191,561	332,819	374,850	350,313	363,343	389,922	435,000	466,550	7.25%
Office Operating expenses	249,930	300,757	312,744	315,608	324,948	337,207	352,242	353,235	0.28%
Staff training/ Conference expenses	151,386	163,053	135,996	169,122	164,441	148,603	162,500	301,500	85.54%
ICANN contract fee	321,655	136,732	260,333	284,161	243,026	244,657	278,866	260,000	-6.77%
Bank service fees	132,080	138,337	145,823	156,496	167,917	177,670	194,000	203,000	4.64%
Insurance expense	126,673	126,751	129,971	131,550	128,793	173,610	189,738	192,500	1.46%
Recruitment expense	99,574	89,472	144,423	119,077	94,307	134,793	200,000	120,000	-40.00%
Membership fees	68,392	48,294	55,611	49,532	48,971	52,296	49,222	54,218	10.15%
Postage & delivery	28,493	45,269	22,071	51,029	41,893	40,610	43,500	48,500	11.49%
Printing & photocopy	38,115	36,586	48,508	33,807	38,165	29,311	35,000	39,500	12.86%
Doubtful debt expenses	27,099	30,990	34,259	-54,293	-6,225	14,653	25,000	25,000	
Translation expenses	11,928	15,255	1,623	2,883	11,147	9,027	8,500	22,500	164.71%
Rent and Outgoings	-12,562							10,000	
Tax expenses	-17,506	-96,166	-34,609	12,777	-18,217	-82,284			
TOTAL EXPENSES	14,404,193	14,585,138	15,533,822	16,818,270	18,050,078	19,594,644	21,395,806	22,928,778	7.16%
	1.3%	6.5%	8.3%	7.3%	8.6%	9.2%	7.2%		

Table 5.1 Expenses over time – by value

5.2 Salary and Wages

Salary and wages will increase by 8.8% in 2019 when compared to the forecast expenditure for the 2018 year. The assumptions included in this budget are:

- Employee superannuation contributions will remain at 9.5%
- All permanent staff will take 3.5 weeks of annual leave
- The overall allowance for salary increases resulting from role changes and annual performance reviews will be set at 3.5%
- Existing headcount commitments continue from 2018 with the provision made for the recruitment of a legal officer during 2019 (Refer 3.3.3.1 Activity Plan) and a new training position to support foundation activities (3.1.4)
- As in 2018, two APNIC staff will be seconded to the APNIC foundation, their costs are included in the expense; Contribution to APNIC foundation.

5.3 Travel Expenses

APNIC's travel expenses will not increase in 2019.

This category includes travel for; APNIC Staff, APNIC EC, NRO AC, Support for SIG Chairs.

Travel expenses include all corporate travel management fees and International SOS membership, which provides advice and emergency assistance for those travelling on APNIC business.

5.4 Professional fees

Professional Fees will increase by 1.4%, the major contributor is the APNIC Academy. Details for 2019 expenses are (cross-referenced with sections/items in the Activity Plan document):

• Labs consultancy (3.3.3)	192,000
• CRM Consultant (3.1.2.9)	180,000
• Investment Consultant Service (3.4.2.1)	147,000
• Legal Advice & Expenses (3.4.3.1)	140,000
• Non-staff trainers (3.1.4.2)	120,000
• Design Consultancy (3.1.2)	120,000
• HR Consulting Fees (3.4.1)	100,000
• External Consultant Technical Assistance (3.1.4.3)	60,000
• Benchmarking consultancy (3.1.2.1)	50,000
• Outsourced Content Development (F2F & Online) (3.1.4.4)	50,000
• Non-staff trainers' travels (3.1.4.2)	50,000
• Travel for guest speakers and media (3.2.1.1)	43,000
• Audit Fees – PWC (3.4.2.1)	40,000
• Financial and Tax advice – KPMG (3.4.2.1)	35,000
• NetSuite Consulting Support (3.1.3.4)	35,000
• ISO27001 (ISMS) Consulting (3.1.3.6)	30,000
• APNIC 47 Stenography fees (3.2.1.1)	28,000
• APNIC 48 Stenography fees (3.2.1.1)	28,000
• ISO9001 Recertification Consulting (3.1.2.6)	21,000

5.5 Computer Expenses

Computer expenses include all non-capital purchases of equipment, consumables, license and support fees for hardware and software. There are several costs related to work already commenced which contribute to the increase in 2019. Major expenses in 2019 are:

• NetSuite ERP Licenses (3.1.3.4)	120,000
• Cloud Computing Expenses (3.3.3.1)	100,000
• Salesforce Licence (3.1.2.9)	86,000
• APNIC Academy - Virtual Labs (3.1.4.4)	75,000
• Firewall & Intrusion detection/prevention (3.1.3.2)	57,240
• F5 BIG-IP Support and maintenance (3.1.3.2)	50,000
• APNIC Academy - Third-party Course Content (3.1.4.4)	50,000

• Pardot Licence Expenses (3.1.2.9)	39,000
• VMware licenses (3.1.3.2)	30,000
• Nexonia Expense Reporting (3.1.3.4)	25,000
• Hardware maintenance support (3.1.3.2)	23,000
• Maintenance contract - DNSSEC signers (3.1.3.2)	20,000

5.6 Depreciation Expenses

Depreciation expenses are budgeted based on analysis of the existing depreciation and capital allowance schedules; including anticipated depreciation based on Capital Expenditure planned for 2019. The amounts budgeted for 2019 are:

• Equipment depreciation (3.1.3.2)	680,460
• Capital works allowances - 6 Cordelia St (3.4.4.1)	161,432

5.7 Sponsorship and Publicity Expenses

Sponsorship and Publicity expenses include APNIC contributions to the NRO expenses, the ISIF program, and sponsorship of NOG's and other community events. Major expenses in 2019 include:

• NRO Expenses APNIC Contribution (3.3.1.1)	176,000
• Regional technical development NOG sponsorships (3.2.2.3)	120,000
• APNIC contribution to ISIF grants pool (3.2.4.2)	100,000
• Google PPC Advertising - member outreach (3.1.2.5)	80,000
• Regional community development sponsorships (3.2.3.1)	65,000
• Research grants on technical issues (3.2.4.2)	60,000
• APNIC conference fellowships (3.2.2.2)	60,000
• Regional security sponsorships (3.2.2.4)	40,000
• Regional/national IGFs sponsorship (3.2.3.5)	40,000
• General promotional items (3.1.2.1, 3.2.1.1)	20,000

5.8 Communication Expenses

Communication expenses include data network expenses, Internet connectivity expenses, telephony and mobile phone expenses. The major contributors to costs here are the ongoing cost of the dark fibre network and the cost of rack-space in the co-locations that are critical to APNIC's network resilience. The major costs included in the 2019 budget include the following:

- Rack hire, power, cross connect (3.1.3.1)

105,024

• Interactive Datacentre rack hire (3.1.3.1)	58,000
• AU switch, router, Wi-Fi, VPN Smartnet (3.1.3.1)	57,000
• Peering: 250Mbps PIPE/TPG Transit & Peer (3.1.3.1)	50,000
• Comscentre VoIP hosting service (3.1.3.4)	45,000
• Dark Fibre: Office-EMP - Eight Mile Plains (3.1.3.1)	42,000
• Netnod anycast secondary DNS hosting (3.1.3.1)	30,000
• Megaport, PCCW connection to SG, HK and Japan (3.1.3.1)	30,000
• Anycast Global load balancing - RDAP & whois (3.1.3.1)	25,000
• Cloud compute Engine - Google, Amazon (3.1.3.5)	20,000
• Vocus dark fibre and peering - Equinix (3.1.3.1)	18,360
• AU Peering: AARNET transit and Eduroam service (3.1.3.1)	17,000
• Server hosting - DNS Anycast (3.1.3.1)	16,800
• Server hosting - Whois and RDAP (3.1.3.1)	15,000
• External backup storage (3.1.3.1)	15,000

5.9 Contribution to APNIC Foundation

APNIC will underwrite Foundation costs up to a maximum of \$746,208 in 2019. Included in this amount is the costs for the two APNIC staff seconded to the Foundation and recovery of other internal resource costs (Activity Plan item 3.2.4). Details can be found at 7.1 below.

5.10 Meeting and Training Expenses

Meeting and Training expenses include all the costs incurred in running the meetings including APNIC conferences and other meeting/training events. This includes; venue and equipment hire, catering and social events. The major contributors to this expense are the APNIC conferences in 2019 in Daejeon, South Korea and Chiang Mai, Thailand. While not all meeting expenses are included in this expense, the major venue and logistic costs are included. A portion of these costs in some instances is offset by sponsorship and Registration/workshop income. Major provisions included in the 2019 budget are:

• APNIC 48 Conference week - main plenary (3.2.1.1)	60,000
• APNIC 48 Conference AV rental (3.2.1.1)	40,000
• End of year and mid-year Staff Events (3.4.1.3)	32,500
• Training support - venue and catering (3.1.4.1)	30,000
• APNIC 47 - APRICOT Closing Reception (3.2.1.1)	30,000
• APNIC 48 Workshop week – catering (3.2.1.1)	25,000
• APNIC 48 Conference closing dinner (3.2.1.1)	25,000
• APNIC 48 Opening reception (3.2.1.1)	24,000

• Staff Entertainment annual (3.4.1.3)	18,000
• APNIC 47 AV-Webcast Equipment Rental (3.2.1.1)	18,000
• Services outreach exhibition (3.2.1.1)	15,000
• APNIC 48 Conference week - venue hire (3.2.1.1)	15,000
• APNIC 48 Workshop week - venue hire (3.2.1.1)	14,500
• APNIC 47 Conference Package (3.2.1.1)	12,000
• 6 Member gatherings (3.1.2.5)	11,000
• APNIC 48 Conference signage (3.2.1.1)	10,000

5.11 Office Operating Expenses

The major costs in this item include electricity, land tax, council and water rates, cleaning and rubbish removal, air-conditioning and security. Major planned expenditure for 2019 includes:

• Cordelia Street – Electricity (3.4.4.1)	60,000
• Land Tax (3.4.4.1)	56,900
• Kitchen Supply and Catering Expense (3.4.4.1)	52,500
• Office Cleaning (3.4.4.1)	45,000
• BCC Rates (3.4.4.1)	36,000
• WHS Support t(3.4.3.2)	12,000
• General Maintenance and repairs (3.4.4.1)	10,000
• Rubbish removal (3.4.4.1)	9,000
• Office building A/C service monthly (3.4.4.1)	7,560
• Health Checks (3.4.3.2)	7,500
• Water Rates (3.4.4.1)	6,500
• Plant Hire (3.4.4.1)	6,000
• Stationery Supplies (3.4.4.1)	5,000
• Electrical repair & testing (3.4.4.1)	5,000

6 Capital Expenditure

Capital expenditure comprises equipment & software and office equipment. For the 2019 budget submission capital expenditure provision is \$874,411. Of this amount, \$759,411 relates to Equipment & Software, and \$115,000 relates to Office Furniture & Fittings as set out in the table below:

CAPITAL (AUD)	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	F'Cast 2018	Budget 2019	Change
Equipment & Software	337,479	661,095	662,698	671,551	809,626	572,206	575,000	759,411	32.07%
Office Furniture & Fittings	60,664	89,911	31,278	36,371	12,136	110,211	115,000	115,000	
Total - Capital Expenditure	398,143	751,006	693,976	707,922	821,762	682,417	690,000	874,411	26.73%

Table 6.1 Capital Expenditure over time

Major items in Equipment & Software include:

- 2 x Router and 2 switches 10Gb, peering and cloud (3.1.3.1) 205,112
- New IXP Development X 4 (3.2.2.2) 200,000
- Dell blade cache (3.1.3.1) 65,000
- New compute server, switches, sundries – Research (3.3.3.1) 60,000
- 2 x Network switch - APNIC office. (3.1.3.1) 29,000
- Openflow Switches, lab content - SDN workshop (3.1.4.1) 25,000
- Office WIFI controller replacement (3.1.3.1) 20,432
- Firewalls to enhance lab of security workshop (3.1.4.1) 20,000
- Conference/Spare laptops - 5x replacements (3.1.3.4) 15,000
- 4 x remote controlled webcast cameras. (3.1.3.1) 14,400
- New headsets for MS and RS (3.1.2.1) 7,800
- Wireless access points and Wifi Monitoring Tool (3.1.2.1) 6,800
- Office Machines - printers, TVs, etc. (3.4.4.1) 6,000
- Staff monitor due for replacement (3.1.3.1) 6,000
- 15 WIFI Controller licenses for conference (3.1.3.1) 5,619

Office Furniture & Fittings include allowances for replacement of office furniture and kitchen equipment, office modifications and alterations.

- Major costs will be related to the installation of bathroom facilities on Level 2.

7 APNIC Foundation

The APNIC foundation will require up to a maximum of \$746,208 of funding in 2019, details of expected revenue and expenses for the foundation are included below:

	Budget 2017	FY 2017 in USD	FY 2017	Budget 2018	Forecast 2018	Budget 2019	Budget vs Forecast Var	Variance %
Operating Contribution Received - APNIC	720,281	USD 517,641.82	665,058	700,683	690,000	746,208	56,208	8%
Contribution Received - Grants	0	USD 5,490.81	7,055	145,000	601,348	619,000	17,652	3%
Interest Income	0	USD 47.25	61	0	139	0	(139)	-100%
TOTAL REVENUE	720,281	USD 523,179.88	672,173	845,683	1,291,487	1,365,208	73,721	6%
EXPENSES								
Grant Expenses		USD 5,490.82	7,055	145,000	601,348	619,000	17,652	3%
Other Expenses		(USD 5,585.53)	(7,176)	0	0	0	0	0%
Operating Expenses								
Bank Service Fees	350	USD 117.46	151	500	1,020	1,000	(20)	-2%
Communication Expenses	5,000	USD 0.00	0	3,000	2,502	3,000	498	20%
Computer Expenses	5,000	USD 500.97	644	1,000	3,813	5,000	1,187	31%
Depreciation Expense	2,640	USD 545.79	701	0	0	0	0	0%
Meeting and Training Expenses	1,500	USD 2,393.75	3,075	1,500	0	0	0	0%
Personnel Support Expenses	512,481	USD 361,950.86	465,029	532,873	502,628	572,808	70,180	14%
Postage & Delivery	250	USD 0.00	0	250	234	500	266	114%
Printing & Photocopy	5,000	USD 0.00	0	1,000	0	1,000	1,000	0%
Professional Fees	30,000	USD 65,202.53	83,771	40,000	24,446	40,000	15,554	64%
Recruitment Expense	5,000	USD 0.00	0	2,000	0	1,500	1,500	0%
Staff Training Expense	5,000	USD 980.50	1,260	2,000	0	2,000	2,000	0%
Translation Expense	2,500	USD 0.00	0	1,000	1,126	1,000	(126)	-11%
Travel Expenses	145,560	USD 86,067.46	110,578	115,560	154,371	118,400	(35,971)	-23%
TOTAL EXPENSES	720,281	USD 517,664.61	665,087	845,683	1,291,487	1,365,208	73,721	6%
OPERATING SURPLUS/(DEFICIT)	0	USD 5,515.27	7,086	0	0	0	-0	0%

REVENUE and EXPENSES (AUD)	Budget 2017	FY 2017 in USD	FY 2017	Budget 2018	Forecast 2018	Budget 2019	Budget vs Forecast Var	Variance %
Total Revenue	720,281	USD 523,179.88	672,173	845,683	1,291,487	1,365,208	73,721	6%
Total Expenses	720,281	USD 517,664.61	665,087	845,683	1,291,487	1,365,208	73,721	6%
OPERATING SURPLUS/(DEFICIT)	0	USD 5,515.27	7,086	0	0	0	-0	0%

Table 7.1 APNIC Foundation – Financial Estimates 2019