



## **Australian National Peering Policy**

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***Document Control***

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## ***Introduction***

AARNet Pty Ltd (APL) operates a national network (AARNet) on behalf of its shareholders (the Australian Universities and CSIRO), collaborating organisations and other related parties. It is focused on providing a high quality, redundant and resilient service to its clients and will enter into peering relationships if it feels that such a relationship will be to the overall continuing benefit of APL and its clients.

This Policy applies to all requests for settlement-free interconnection with AARNet, either via dedicated connections (“direct peering”) or via traffic exchange at a multi-party network access point (“public peering”) and should only be taken as a general guide to the approach that is taken by APL in deciding to peer with another Internet Network. APL will have no legal or other obligations as a result of providing this document. Each request to peer with AARNet will be considered by APL on a case-by-case basis and is subject to execution of a formal agreement setting out the terms and conditions that may apply to that particular peering arrangement.

In addition to the criteria set forth below, APL’s ability to enter into peering arrangements with another Internet Network are subject to normal commercial and technical considerations including the requester’s financial stability and the availability of peering ports and AARNet’s backbone capacity in particular locations.

APL conducts periodic internal reviews of its Peering Policy to ensure that the criteria for peering eligibility are consistent with APL’s network growth and expansion. This Peering Policy will be revised on a regular basis to reflect this analysis. Existing peering partners may be asked at times to re-qualify for continued peering.

APL has separate policies based on the primary place of business of the requester, the scope of their network and their traffic mix. This policy applies to requesters whose primary place of business is Australia and wish to peer with AARNet nationally.

## ***Interconnection Requirements***

- **Bilateral Peering.** APL requires that any agreement be bilateral. APL will not enter into any agreement that requires a multilateral peering agreement as APL doesn’t believe this provides adequate control over the quality of any interconnection arrangements.
- **Geographic Scope.** The Requester shall operate facilities capable of terminating IP customer leased line connections onto a device in at least three states or territories of the Commonwealth of Australia and the Requester must have a backbone node capable of peering with AARNet in, at a minimum, the following cities: Melbourne and Sydney plus one of Adelaide or Perth.
- **Traffic Exchange Ratio.** The ratio of the aggregate amount of traffic exchanged between the Requester and AARNet shall be roughly balanced and shall not exceed 2:1.
- **Traffic Exchange Volume.** The monthly average traffic volume exchanged between the Requester and AARNet, across all points of interconnection, shall exceed an average of One Mbps in each direction.
- **Backbone Capacity.** The Requester shall have a fully redundant backbone network, in which the majority of its inter-hub trunking links shall have a capacity of at least 155 Mbps.

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- Dedicated peering. Each party must provide fifty percent of the dedicated peering connections and APL must be permitted to use its own capacity for the connections it provides. These connections must use either Ethernet or Packet over SDH technology and have a minimum bandwidth of 100 Mbps.
- Access to the AARNet Mirror. Should the aggregate traffic between the Requester and AARNet otherwise be within the 2:1 ration when traffic to and from the AARNet Mirror site is excluded then in order to obtain access to the AARNet Mirror site APL would require the Requester to peer with AARNet in the city where the AARNet Mirror is located, currently Canberra, in addition to the other mandatory locations.

### **Operational Requirements**

The following operational requirements apply both to the Requester and to APL:

- Each Internet Network must establish and maintain traffic exchange links of a sufficient robustness, aggregate capacity, and geographic dispersion to facilitate mutually acceptable performance across the interconnect links.
- Each Internet Network must operate a fully functional twenty-four hour, seven days a week (24x7) Network Operations Centre or provide a mechanism to report and action fault reports 24x7.
- Each Internet Network must set next hop to be itself, the advertising router of the network. Each Internet Network will propagate such routes to its transit customers with its own router as next hop.
- Each Internet Network shall implement “shortest exit routing” and advertise routes consistent with that policy, unless both Internet Networks mutually agree otherwise based on special circumstances.
- Each Internet Network shall not establish a route of last resort, i.e., default route, directed at the other party.
- Each Internet Network will restrict its advertisements to non-transit routes originating within the geographic region for which peering is established and will not propagate the received route announcements outside such region.
- Each Internet Network must operate a fully redundant network, capable of handling a simultaneous single-node outage in each network without significantly affecting the performance of the traffic being exchanged.
- The two Internet Networks must exchange with each other prior to any settlement-free interconnection agreement a free shell or PPP account for testing and auditing purposes related to routing. This will be used for confirmation of traffic flows, troubleshooting of interconnection-related issues, and auditing purposes.
- Each Internet Network must be responsive to unsolicited email and network abuse complaints, as well as routing and security issues, providing a knowledgeable technician within a two-hour period after notice.
- Each Internet Network must filter routes at their network edge, i.e. only listen to the routes that their customers have pre-registered so that such customers do not announce routes that are not registered.

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- Each Internet Network will announce consistent routing announcements to the other. Consistent announcements require that all routes be announced at all peering sites with the same aggregation properties.
- Each Internet Network must register all prefixes that may be announced by them in a publicly accessible Internet Routing Registry, RADB is preferred.
- APL has a preference for using MD5 passwords on any routing exchange.

### ***Requests for peering***

All requests for settlement-free interconnection should be submitted to AARNet via electronic mail to [peering@aarnet.edu.au](mailto:peering@aarnet.edu.au). The Requester should include information that addresses the requirements and include a copy of their network map and peering policy, if available.