



**Pacific Wave Participant Agreement (“Agreement”)**

Participant	
Contact	
Title	
Address	
Phone	
Fax	
Email	

The contracting entity for Nodes in California is Corporation for Education Network Initiatives in California (“CENIC” and “Node Mgr”). For purposes of this Agreement, notices shall be sent to:

CENIC  
 Attention: Louis Fox  
 16700 Valley View Ave., Suite 400  
 La Mirada, CA 90638  
 United States of America  
 +1 714 220 3400

Seattle Node contracting entity is Pacific Northwest Gigapop (“PNWGP” and “Node Mgr”). For purposes of this Agreement notices shall be sent to:

PNWGP  
 Attention: Judy Brandon  
 1201 Third Avenue South, 48<sup>th</sup> Floor  
 Seattle, WA 98101  
 United States of America  
 +1 206 727 9900

“Node Mgr” means that contracting entity as noted above as associated with the node site(s) selected. Node Mgr and Participant may be referred to individually as “Party” and collectively as the “Parties”. Participants who wish to connect in both California and Seattle, must complete this form for each applicable contracting entity.

**PACIFIC WAVE INTERNATIONAL EXCHANGE SERVICE OPTIONS and FEES** (check as appropriate)

Each of the locations below is a “Node.” Select the desired Node location to receive Service:

SEATTLE, WASHINGTON  
 Westin Building, Seattle, WA, USA

LOS ANGELES, CALIFORNIA  
 818 W. 7<sup>th</sup>, Los Angeles, CA, USA  
 One Wilshire, Los Angeles, CA, USA  
 600 W. 7<sup>th</sup>, Los Angeles, CA, USA

BAY AREA CALIFORNIA  
 1380 Kifer Road, Sunnyvale, CA, USA  
 529 Bryant, Palo Alto, CA, USA

Select Service:

		Installation Fees (per port)	Annual Fee
_____	GbE	Waived	= US\$ 5,000.00
_____	10GbE	Waived	= US\$12,000.00
_____	100GbE	Waived	=US\$ 48,000.00

These fees do not include any necessary Participant-site connection equipment, collocation facilities, restricted network connectivity or authorization fees, or other telecommunications carrier or other third party fees.

Neither party to this Agreement will incur any financial obligation to the other party in exchange for peering. Neither party to this Agreement may charge the other party a settlement fee for Internet traffic exchange. Any amount paid by the Participant to the Node Mgr for connectivity to Pacific Wave shall not be considered a peering or settlement charge under this Agreement.

---

## TERMS OF PARTICIPATION

THIS PACIFIC WAVE PARTICIPANT AGREEMENT (“Agreement”) is made and entered into as of the date last executed (the “Effective Date”), by and between the Parties and they agree as follows:

1. **Service.** Node Mgr agrees to provide to Participant those services ("Service" or "Services") selected by Participant as set forth above.
2. **Term, Renewal, and Termination.**
  - a. The term of this Agreement is for ONE calendar year (plus those days of service provided during the month of installation) ending on \_\_\_\_\_ [Month Day, Year].
  - b. Subject to 2(c) below, unless either the Node Mgr or the Participant provides written notice to the other party at least thirty (30) days prior to the expiration date of this Agreement, this Agreement will automatically renew for a one-year term on each successive expiration date.
  - c. After the initial term, either party may terminate this Agreement by giving the other party written notice of termination sixty (60) days prior to the date of termination.
3. **Fees and Payment.** All fees are due thirty (30) days from the date of Node Mgr’s invoice. At Participant’s option and to the extent the option is provided by Node Mgr, Participant may elect to replace the annual payment plan with an installment plan as specified in an Attachment. Payment Terms are Net 30 days and are billed in advance of service. For partial months of service, fees will be prorated to the first of the next month. All subsequent service invoices will be for services beginning the first of the month and through applicable payment period.
4. **Warranties; Disclaimer.** THE NODE MGR WILL PROVIDE THIS SERVICE ON A BEST-EFFORT BASIS WITH NO EXPLICIT OR IMPLICIT GUARANTEES OF SWITCH AVAILABILITY OR PERFORMANCE. NODE MGR EXPRESSLY AND SPECIFICALLY DISCLAIMS ANY AND ALL PROMISES, REPRESENTATIONS, AND WARRANTIES, EXPRESS, IMPLIED OR OTHERWISE, WITH RESPECT TO THE SUBJECT OF THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO ANY MATERIAL, SERVICES, AND/OR PRODUCTS, TANGIBLE OR INTANGIBLE, FURNISHED HEREUNDER, OR ANY COMPONENT THEREOF, AND THE EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE THEREFOR, IN NO EVENT WILL NODE MGR BE LIABLE FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES OF ANY NATURE IN CONNECTION WITH, ARISING OUT OF OR RELATING TO THIS AGREEMENT (INCLUDING LOSS OF PROFITS, USE, DATA, OR OTHER ECONOMIC

ADVANTAGE), INCLUDING, WITHOUT LIMITATION, ANY CAUSE OF ACTION SOUNDING IN CONTRACT, TORT OR STRICT LIABILITY, OR OTHERWISE, EVEN IF NODE MGR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

5. **Compliance.** Participant shall not use the Services in such a manner that adversely impacts the integrity of the applicable Service or the ability of any other Participant of Pacific Wave to use the Service. Any network integrity, infrastructure, or configuration problem that adversely impacts the Services provided by Node Mgr to Participant or to any other party, in the sole opinion of Node Mgr, that is related to Participant's network, Participant's computers, or Participant's use of Service, whether authorized by Participant or not, may result in the immediate suspension of Service by Node Mgr until such problem is corrected to the satisfaction of Node Mgr. If, in Node Mgr's sole opinion, the Participant's use of Service cannot be reconnected in a secure fashion, then Node Mgr shall have the right to terminate this Agreement. In that event, Node Mgr shall refund a pro-rata portion of the fees paid by Participant as provided for in this Agreement.
6. **Responsibilities of Node Mgr and Participant.** See Attachment One, incorporated by this reference.
7. **Pacific Wave Policies and Procedures.** See Attachment Two, incorporated by this reference.
8. **Publication and Publicity.** Node Mgr shall have the right to publish and publicize information about the following, as applicable: Participant's organization name, peering AS Number, website URL, and peering coordinator contact. Node Mgr will also provide/publish such reasonable information as Participant asks to make available in conjunction with their participation at Pacific Wave so long as the information is for the express purpose of facilitating their peering opportunities. In addition, Node Mgr shall have the right to publish and publicize statistics and traffic information on an aggregated or anonymous basis such that no Participant information can be identified to any specific entity.
9. **Indemnification and Insurance.** Each party to the Agreement shall defend, indemnify, and hold the other harmless from claims arising from the negligent acts and omissions of its officers, employees, and agents, including failure to comply with applicable laws and regulations. Each party to this agreement shall insure its equipment for its full value, and waives subrogation against the other to the extent of such coverage. Neither party to this agreement is responsible for insuring the other or the participants of either against business interruption.
10. **Dispute Resolution.** In the event of a dispute over the performance of this Agreement, representatives of both the Node Mgr and the Participant shall meet (either in person or via telephone) within two weeks of notice of such dispute (delivered to the contact listed at the end of this agreement) for the purpose of resolving the dispute.
11. **Governing Law.** If Node Mgr is CENIC, this Agreement shall be governed by the laws of California, United States of America. If Node Mgr is PNWGP, this Agreement shall be governed by the laws of Washington, United States of America.
12. **Survival.** The provisions of Sections 5-10 and 12-17 shall survive the termination or expiration of this Agreement irrespective of the reasons therefor.
13. **Enforceability.** If any portion of this Agreement is determined to be invalid by a court of law, then the remaining sections will remain valid and in effect.
14. **Independent Contractor.** Each party to this Agreement is an independent contractor and no principal/agent or partnership relationship is created between them by this Agreement.
15. **Headers.** The captions of sections herein are intended for convenience only, and the same shall not be interpretive of the content of such section. Should any provision of this Agreement be held unenforceable or in conflict with the law of any jurisdiction, then the validity of the remaining provisions shall not be affected by such a holding.

- 16. **No Waiver.** No waiver by either party of any breach or default shall be deemed as a waiver of prior or subsequent default of the same or other provisions of this Agreement.
- 17. **Assignment** This Agreement shall inure to the benefit of Node Mgr, its successors and assigns, but will be personal to the Participant and shall be assignable by the Participant only with the prior written consent of Node Mgr, which may not be unreasonably withheld or delayed. Node Mgr shall have the absolute, unfettered right to transfer this Agreement and its rights and obligations thereunder to any third party upon notice to the Participant.
- 18. **Notices.** Any notice under this Agreement must be in writing and shall be effective upon delivery by hand or three (3) business days after deposit in an appropriate mail service, postage prepaid, certified or registered, and addressed to Node Mgr or to Participant at the corresponding addresses indicated at the beginning of this Agreement. Participant shall be obligated to notify Node Mgr in writing of any change in his/her address. Notice of change of address shall be effective only when done in accordance with this Paragraph.
- 19. **Entire Agreement.** This Agreement sets forth the entire agreement. It incorporates and replaces all prior communications. It cannot be amended except by a document in writing signed by a duly authorized representative of each party.

The undersigned for Participant attests to be a duly authorized signatory to this Participant Agreement on behalf of Participant.

Participant

NODE MGR

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name (please print)

\_\_\_\_\_  
Name (please print)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

**ATTACHMENT ONE**  
**Responsibilities of Node Mgr and Participant.**

1. The Node Mgr will:

- a. Provide and operate Ethernet protocol family switches within leased space for the purpose of operating an Internet exchange point.
- b. Provide the necessary fiber connection between the Node Mgr's switch and the Node-specific fiber panel where Participant will be asked to make the cross-connect to receive the Service.
- c. Monitor the operational status of the Pacific Wave switches and all active switch ports on a 24 hour/day, seven day/week basis.
- d. Assign Internet Protocol (IP) addresses (IPv4 and IPv6) from Pacific Wave IP address space to the Participant for each connected shared VLAN.
- e. Provide IN-ADDR Domain Name Service for the Participant's attached router interface(s). The Participant may provide the IP name(s) to the Node Mgr for this purpose. In this case, the Node Mgr will use the provided name(s) unless the use would violate a law or rule or could lead to liability on the part of the Node Mgr. If the Participant does not express a name preference, the Node Mgr will assign Participant-specific IP name(s) within the PACIFICWAVE.NET domain.
- f. Support multicast and unicast (both IPv4 and IPv6) traffic through the Pacific Wave infrastructure.
- g. Maintain a publicly available list of Pacific Wave participants and administrative contacts responsible for negotiating peering agreements.

The Participant will:

- a. Procure either collocation space for Participant's router within the appropriate Node Mgr facility or direct, unswitched, Ethernet circuit from Participant's router to the Node Mgr facility.
- b. At CENIC and PNWGP's independent elections, peer with CENIC (AS2153) and PNWGP (AS101) as a condition of participation at Pacific Wave.
- c. Make separate arrangements as desired for bilateral peering agreements with other Pacific Wave participants. Each bilateral peering will have at least one entity that is either a not-for-profit or a research division of a commercial entity where such commercial research division has its own AS number unique and separate from the commercial production division(s). Other instances of bilateral peering between two commercial entities over the Pacific Wave infrastructure are not allowed. **THE NODE MGR BEARS NO RESPONSIBILITY FOR THE PARTICIPANT'S ABILITY TO NEGOTIATE, TO ESTABLISH, OR TO MAINTAIN BILATERAL PEERING ARRANGEMENTS WITH ANY OTHER PACIFIC WAVE PARTICIPANT(S).**
- d. Abide by the following rules:
  1. To operate the Participant router(s) and any other Participant equipment attached to Pacific Wave in a manner that does not adversely impact Pacific Wave switch performance.
  2. To use the non-portable IP address(es) assigned by the Node Mgr for the connected router ports and to relinquish them when the Agreement terminates. The Participant agrees not to announce these Pacific Wave addresses to its peers.

3. To use Border Gateway Protocol version 4 (BGP-4) (or the successor exterior routing protocol designated by the Node Mgr) as the routing protocol for all peerings across Pacific Wave. Should Participant choose to exchange multicast traffic across the Pacific Wave, then the following protocols must be used: MBGP, PIM v2 Sparse, and MSDP (ipv4). Participant should make best effort not to propagate RP information via BSR or Auto-RP. If Participant wishes to use other multicast protocols they will seek advance approval from the Pacific Wave engineering team, such approval to be facilitated by the Node Mgr.
4. With the exception of Address Resolution Protocol (ARP) packets, not to generate any broadcast packets across the Pacific Wave switch media from the Participant's attached router interface(s).
5. Not to generate any traffic other than Internet Protocol traffic across the Pacific Wave switch media.
6. Not to make any unauthorized use of another Pacific Wave participant's resources. In particular, the Participant may not use another Pacific Wave participant's facilities for Internet transit without the explicit consent of that participant. In addition, the Participant may not route any of its traffic across Pacific Wave to another participant with which it does not have an established peering agreement. The Participant may send traffic to another Pacific Wave participant only if that traffic is destined for an Internet address that has been announced to the Participant by the other participant or if the other participant has granted the Participant explicit Internet transit privileges.
7. To provide the Node Mgr Network Operations Center (NOC) an updated list with names, positions, phone numbers and electronic mail addresses of the Participant's administrative, technical, and operational contacts for issues related to Pacific Wave. (See Attachment Three, hereby incorporated by this reference.)
8. To acknowledge the Node Mgr as the ultimate arbiter of technical performance in the event the Participant is not in compliance with rule d.1 above.
9. To acknowledge that Pacific Wave is not intended to be used for its participants' primary Internet transit connectivity. The Node Mgr bears no responsibility for any effects of service disruption or performance degradation if the Participant opts to utilize Pacific Wave in this manner.
10. Participants who connect to multiple Pacific Wave Nodes will have active intersite VLAN access between those nodes and hence agree to the following: so long as traffic exchange between peers can happen locally, the intersite VLAN will not be used to support that traffic exchange. Only in those instances when a local peering is no longer available may traffic exchange occur with peers over the intersite VLAN. In other words, the intersite VLAN may only be used as a peering backup. In addition, Participant may not use an intersite VLAN for transport of traffic between Participant's own routers at various Nodes. Failure to comply with this requirement will result in immediate termination of the intersite VLAN access for Participant.
11. Participant agrees not to propagate spanning tree BPDUs to the Pacific Wave switch infrastructure.
12. Participant agrees not to present more than one MAC address per VLAN on a given Pacific Wave connection.
13. Participant will not respond to ARP queries for IP addresses that are not delegated to Participant.

- e. Allow the Node Mgr to disconnect the Participant's connection(s) to the Pacific Wave switches if the Participant fails to abide by any of the rules in Section d. above or in the event of any breach of this Agreement by Participant.
- f. Acknowledge that Pacific Wave has been established as an exchange service based on bilateral peering agreements and that a mandatory multilateral peering agreement (MLPA) is not in effect at Pacific Wave.
- g. Notify the Node Mgr in the event the Participant does not wish its identity and its peering contact information to be made publicly available. In such instances, the Node Mgr will endeavor to maintain the confidentiality of such information to the extent permissible by law.

Should PNWGP and/or CENIC elect to peer with Participant, then the following Sections 2 and 3 will apply. (Wherever PNWGP/CENIC appears, it shall refer to PNWGP and CENIC, in each instance in which PNWGP or CENIC opts to peer with Participant, as appropriate.)

2. PNWGP/CENIC and the Participant (individually the "Peering Party" and together the "Peering Parties") mutually agree:
  - a. to establish direct physical connectivity from their respective networks to the Pacific Wave switching infrastructure.
  - b. to maintain sufficient, loss-free, and stable connectivity between their respective networks and the Pacific Wave switches.
  - c. to provide to the other Peering Party a current list of appropriate administrative, technical, and operational contacts for this peering including telephone numbers and electronic mail addresses for these contacts.
  - d. not to route any traffic to the other Peering Party's network(s) for destinations that are not explicitly announced by the other Peering Party in the peering(s) between PNWGP/CENIC and the Participant.
  - e. not to use the other Peering Party's network for Internet transit. Each Peering Party must maintain separate Internet transit arrangements throughout the duration of this Agreement.
  - f. not to establish any static routes to the other Peering Party's networks over Pacific Wave. This provision does not apply to loopback addresses that may be configured on either Peering Party's border routers directly attached to Pacific Wave.
  - g. not to announce exchanged routes to the Peering Party's Internet Service Provider(s) or to any other peers without the advance permission of the other Peering Party.
  - h. not to announce in the peering(s) between the Peering Parties' border routers any routes other than those that each Peering Party is legally entitled to announce to the Internet at large.
  - i. not to take or to permit any step that either is intended to cause or knowingly will cause a destabilization or a degradation of performance within the other Peering Party's network.
  - j. to acknowledge the right of each Peering Party to terminate peering temporarily and without advance notice to the other Peering Party in the event that:
    - 1) there is evidence that a condition(s) in Section 2 of this Agreement is being violated by the other Peering Party and/or
    - 2) the peering(s) over Pacific Wave becomes unstable or causes a performance degradation and/or an internal network destabilization for either Peering Party.

3. PNWGP/CENIC and the Participant agree to make "good faith" efforts:

- a. to maintain stable, continuous peering between each Peering Party's border router(s) over Pacific Wave. In the event that the peering(s) must be hard reset under non-emergency conditions, these hard reset(s) should be done during off-peak hours.
- b. to provide notice to the other Peering Party's operational contact(s) in advance of a peering reset or termination under non-emergency conditions.
- c. to aggregate their routing announcements to each other to the maximum extent possible while remaining consistent with the level of aggregation being done for the Internet at large by each peer.
- d. to register each Peering Party's respective routes announced over these peering(s) in the Global Routing Registry.
- e. to minimize the level of route flap in the routing announcements made to the other Peering Party.

SAMPLE



**ATTACHMENT TWO**  
**Pacific Wave Policies and Procedures**

Node Mgr maintains exchange point facilities, which are provided for connecting certain equipment provided by Participant to a shared media.

Node Mgr and Participant shall determine the physical access or port type and other requirements necessary to support attachment of Participant's equipment to this shared media.

Upon determination of Participant's requirements, Node Mgr and Participant shall establish a mutually acceptable date for installation of any cabling required to initiate the Service for Participant. Node Mgr will not be responsible for delays in installation for reasons beyond its control, including, but not limited to, delays in the delivery of supplied equipment, delays in provision of services provided by third parties, delays caused by Participant, or other delays beyond the control of Node Mgr.

Participant should contact the Pacific Wave in the following ways:

1. E-mail: Send a message to noc@pacificwave.net.
2. Phone: Call Pacific Wave at 1 888 PAC WAVE (1 888 722 9283) in U.S. or Canada; or +1 206 722 9283.

Participant further agrees and acknowledges that:

- a) The public exchange is in multiple shared VLANs;
- b) The monitoring and maintenance of the exchange media is Node Mgr's or its designee's responsibility;
- c) Node Mgr has limited ability to control all problems that may arise within this complex structure.

Certain security or acceptable use problems as defined in this Agreement may cause Node Mgr to immediately discontinue Services to Participant at Node Mgr's sole discretion. Under no circumstances shall Node Mgr be obligated to reconnect Participant or be liable for any loss whatsoever of Participant due to discontinued services.

**ATTACHMENT THREE  
Participant Information Form**

**Participant Name and Address:**

**Participant Name:**

**Street Address:**

**City, State, Zip:**

**Billing Address if different from above:**

**Participant Name:**

**Street Address:**

**City, State, Zip:**

**AS Number:** \_\_\_\_\_

**Technical Contact:**

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

**NOC Contact:**

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

**Peering Contact:**

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

**Billing Contact:**

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

**Administrative Contact:**

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Please note that a Pacific Wave Node Mgr. will take requests and provide information to authorized contacts only. To add more than one contact, please send their name, email address, and phone number to [noc@pacificwave.net](mailto:noc@pacificwave.net)