Network Operations

- NOC
  24 hour phone service (1300 APL NOC or +61 2 9963 3538)
  E-mail is monitored during business hours
  noc@aarnet.edu.au

NOT
  your_favourite_engineer@aarnet.edu.au

On-call engineer is from a pool of Network Engineers & Systems Administrators from AARNet Operations.

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NOC

- IP Routing
- CPE Operations & Maintenance
- Peering
- Backbone Circuit Monitoring
- Optical Circuit Co-ordination
- Traffic Billing, Capacity Management & Planning
- New service development & deployments
- Maintenance scheduling & notifications
- Emergency fault notifications
Network Engineers…

AARNet National Network

20 Pops, 150+ routers

AARNet International Network
We get a lot of mail, sometimes things get missed....

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>4197</td>
<td>3038</td>
</tr>
<tr>
<td>August</td>
<td>3471</td>
<td>2826</td>
</tr>
<tr>
<td>September</td>
<td>4130</td>
<td>2327</td>
</tr>
<tr>
<td>October</td>
<td>4554</td>
<td>4205</td>
</tr>
<tr>
<td>November</td>
<td>4682</td>
<td>2318</td>
</tr>
<tr>
<td>December</td>
<td>2391</td>
<td>1941</td>
</tr>
</tbody>
</table>

TOTAL* 40080

- Includes all Alarms, Notifications, Peering, SPAM & Customer e-mails...
Customer Maintenance Events

The NOC would always like to be told about your upcoming maintenance event.

But how? Currently an e-mail to noc@aarnet.edu.au with a subject of “Upcoming maintenance xx/yy at hh:mm”

But what timezone is this?
How long?
Which CPE in particular, and is it the whole rack/room/building/site/state offline?
Customer Maintenance Events

The NOC then will do the following:

- Create a ticket (NOCTTS-xxxx)
- Set a reminder in the Ops Diary
- Inform other NOCs
- Inform other affected parties (if any)
- Send back an acknowledgment

Maintenance Event Notifications

- SITE-L mailing list or
- aarnet-ops-contacts@customer.edu.au

120 Site-L messages in 2008-09 (1/7/08-30/6/09)
100 topics

Is e-mail the best method?
Multi-site customers & multiple engineers well co-ordinated?
Site-L inconsistency

- Messages are manually generated – which leads to different styles & accuracy

<table>
<thead>
<tr>
<th>SUBJECT:</th>
<th>Outage - AARNet Hawaii to Seattle 10G SXTransport (North) circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCOPE:</td>
<td>AARNet Perth ‘B’ Pop (PER-B, CSIRO ARRC, Kensington)</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>SUBJECT:</th>
<th>Site Power Works</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCOPE:</td>
<td>AARNet Perth ‘B’ Pop (PER-B, CSIRO ARRC, Kensington)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CORE NODES:</th>
<th>syd-a-bb1 bne-a-bb1</th>
</tr>
</thead>
<tbody>
<tr>
<td>START TIME:</td>
<td>1:00 am, 21/04/09</td>
</tr>
<tr>
<td>END TIME:</td>
<td>06:00am, 21/04/09</td>
</tr>
<tr>
<td>DESCRIPTION:</td>
<td>Repairs to the carriers network (next gen).</td>
</tr>
<tr>
<td>AFFECTED:</td>
<td>The 10 gig link between Brisbane and Sydney will be down for 5 hours. IP traffic will re-route over another circuit. SDH circuits on this run, L2 circuits that span Sydney to Brisbane will be down for the period. There should be no outage of IP Traffic will re-route over SB1.</td>
</tr>
<tr>
<td>TICKET NO:</td>
<td>aarnet NOCTTS-2422</td>
</tr>
</tbody>
</table>

CONTACT: NOC – 1300 APL NOC (1300 275 662), noc@aarnet.edu.au

Maintenance Event Portal?

**CPE portal improvement – an event list?**

Any customer engineer can see what’s happening, if they missed the original notification or reminder..

![Listing Questnet events](image-url)
Optical Circuits

Most circuits on single leg.

But some circuits on 2 sections…

…and a few go the long way around.
Optical Circuits - Notifications

Operations works with Infrastructure Group to Identify Optical Circuits that will be affected. Currently a manual process.

Automation will happen.

AARNet is deploying Connect Master to track the devices & fibres – but we’re still a way off yet.

www.connectmaster.org

ConnectMaster
## Customer Contacts

**Who to ring, and when?**

Are they on leave, sick, no longer associated with the organisation?

*Up to date contact information, is sometimes, not very up to date.*

*E-mail doesn’t work, if you’ve got a network emergency.*
Customer Contact Portal?

Would a customer contact portal, per organisation be useful?

E-mail?
SMS?
Phone call?
Twitter?

What is the preference? And when to ring?

After-hours?

To call or not to call?

“the brown-out tripped the chilled water system, cutting chilled water to the hospital campus. As it wasn’t monitored, the datacentre support team didn’t notice the loss of the chilled water. A datacentre employee came on scene to check everything was running, but being happy that there wasn’t anything wrong, he left.”

Questions?

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