E-mail Service Overview

Santa Clara County ARES/RACES/ACS

Revised: 11-Jan-2018
E-mail Service

• Standard e-mail service

• Capabilities:
  • Standard server software
  • Standard e-mail client software
    • Recommended: Thunderbird
  • Standard features
    • Rich text formatting, attachments
  • Standard e-mail protocols
    • POP3, SMTP, TLS, SPF, DKIM, ...
  • Anti-X measures
  • Internet gateway
    • But Internet is not required
E-mail and BBS Servers are Co-Located

- Multiple servers, just like with packet
- Numbered 1-5, just like with packet
- Each city has primary and secondary, just like with packet
- Failure of one doesn’t affect the others, just like with packet

<table>
<thead>
<tr>
<th>E-mail Domain</th>
<th>Location</th>
<th>Co-located Packet BBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>email1.scc-ares-races.net</td>
<td>San Jose (Santa Clara Co office bldg)</td>
<td>W1XSC</td>
</tr>
<tr>
<td>email2.scc-ares-races.net</td>
<td>Crystal Peak (South County)</td>
<td>W2XSC</td>
</tr>
<tr>
<td>email3.scc-ares-races.net</td>
<td>Palo Alto</td>
<td>W3XSC</td>
</tr>
<tr>
<td>email4.scc-ares-races.net</td>
<td>Frazier Peak (above Milpitas)</td>
<td>W4XSC</td>
</tr>
<tr>
<td>email5.scc-ares-races.net</td>
<td>varies (drills, events, incidents)</td>
<td>W5XSC</td>
</tr>
</tbody>
</table>
When completed, no single site or link outage can interrupt the network
## Account Details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum Message Size</strong></td>
<td>10 MB</td>
</tr>
<tr>
<td><strong>Mailbox quota</strong></td>
<td>50 MB</td>
</tr>
<tr>
<td>• Warnings at 75% and 90%</td>
<td></td>
</tr>
<tr>
<td><strong>Old message expiry and removal</strong></td>
<td>92 days</td>
</tr>
<tr>
<td>• Warnings at 7 days</td>
<td></td>
</tr>
</tbody>
</table>
Example: Mailbox Quota Warning

Warning: Your mailbox is over 75% full.

For more information, visit:
http://www.scc-ares-races.org/email/email-quota.html
Example: Old Mail Expiry Notice

```
From: postmaster@...
Subject: E-mail Expiry Notice
To:...
Date: Tue, 10 Oct 2017 04:06:02 -0700 (PDT)
Message ID: 2017101010602.8800F1F72B@...
X-Account-Key: account16
X-UIDL: ...

Summary of expiry activity for SCCo ARES/RACES mailbox: ...

=== DELETED ===
The following messages were older than the maximum age of 4 days.
They have been deleted.

Date: 05-Oct-2017
From: ...
Subject: Re: testing for spam
Mailbox: INBOX

To prevent expiry (and warnings):
-- Check your mailbox on a regular basis
-- Make sure your e-mail client is NOT set to leave messages on the server

For more information, visit:
http://www.scc-ares-races.org/email/email-service.html

End of report
```

On our test server only
Accessing the E-mail Service

• E-mail needs MUCH more bandwidth than packet
  • Larger packets, chattier protocols, attachments, rich text formatting
• To get more bandwidth, we have to use higher frequencies
• Higher frequencies mean less RF coverage
• Options for our network (see infrastructure section)
  • TCP/IP at 56+ Kbps via UHF: soon, from most of the county
  • TCP/IP at n* Mbps via WiFi: from locations with line of sight to hub
## E-mail vs. Packet - Summary

<table>
<thead>
<tr>
<th></th>
<th>E-mail</th>
<th>Packet</th>
</tr>
</thead>
<tbody>
<tr>
<td>GUI Interface</td>
<td>✔</td>
<td>GUI Interface</td>
</tr>
<tr>
<td>Supports rich text</td>
<td>✔</td>
<td>Supports only plain text</td>
</tr>
<tr>
<td>Supports attachments</td>
<td>✔</td>
<td>No attachments</td>
</tr>
<tr>
<td>Requires higher bandwidth</td>
<td></td>
<td>Requires minimal bandwidth</td>
</tr>
<tr>
<td>Reduced RF coverage</td>
<td></td>
<td>County-wide coverage</td>
</tr>
<tr>
<td>No workflow support</td>
<td></td>
<td>Rich EmComm workflow (message numbering, delivery receipts, logging, ...)</td>
</tr>
</tbody>
</table>

- Packet – still best for EmComm
  - Best RF coverage; best EmComm workflow

- E-mail – can help with some 3rd party communications
  - Complex encoding, attachments; but requires more BW; less coverage
End