Introduction to Jisc Technologies and its services

Shirley.Wood, Jisc Technologies
Janet – Funding and Policies
» Private Network
» Funded by the HE and FE funding councils in the UK
» Higher Education Institutes
  › Funded for connectivity to deliver their normal business needs
» Further Education Colleges
  › Varies in each country
  › England funded for 10Mbit/s connectivity
Janet Policies

» Janet Eligibility Policy
   › Who can connect

» Janet Acceptable Use Policy
   › What they can do

» Janet Security Policy
   › Keep systems secure
Types of Connection

» Janet Primary Connection
  › Receive all Jisc Technologies services

» Customer Business and Community Engagement Connections
  › Receive basic network connectivity only
Jisc Supported Customers

› Higher Education Institutions
› Further Education Colleges
› Sixth Form Colleges
› Adult Community Learning
› Specialist Colleges

› Skills – no funding for connectivity
Jisc Technologies Supported Customers

» Research Councils

» Local Authorities
  › Schools
  › Normal business

» Other Organisations
  › Met Office, ECMWF, EBI, etc
  › Other organisations that fit Janet Eligibility Policy

» Janet Connected
Janet – the network
The Network

- Very high speed network
- Run by Jisc staff: flexible and designed for research and education needs.

<table>
<thead>
<tr>
<th>Area</th>
<th>Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Education</td>
<td>212</td>
</tr>
<tr>
<td>Further Education</td>
<td>520</td>
</tr>
<tr>
<td>Local Authority</td>
<td>101</td>
</tr>
<tr>
<td>Self-funded</td>
<td>73</td>
</tr>
<tr>
<td>Research Council</td>
<td>38</td>
</tr>
<tr>
<td>Charity / Funders</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>969</strong></td>
</tr>
</tbody>
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The Internet

Business
Academic
Public
In total >300 networks directly connected to Janet

Microsoft
Amazon
Google
Virgin
BBC

Benefits:
• Security
• Speed
• Cost

Designed for research and education needs
Janet: not just big bandwidth
Total Traffic on Janet

Terabytes transferred each month

Month:
- Jan-07
- Jul-07
- Jan-08
- Jul-08
- Jan-09
- Jul-09
- Jan-10
- Jul-10
- Jan-11
- Jul-11
- Jan-12
- Jul-12
- Jan-13
- Jul-13
- Jan-14
- Jul-14
- Jan-15

Traffic:
- 0
- 10,000
- 20,000
- 30,000
- 40,000
- 50,000
- 60,000
- 70,000
- 80,000
Most colleges at 100Mbit/s
  - 67 at 1Gbit/s (10 x faster) at no additional cost due to our procurement strategy

92 colleges have taken up the BIS offer for additional connections
  - Enables and encourages uptake of cost effective cloud services.
Jisc Technologies’ services
Janet Service Desk

- Front line operational support working shifts from 0700 to midnight on week days
- Monitor the Network – keeping those screens green
- Initial point of contact for Janet customers for service and operational matters
- Handle Fault tracking and incident resolution
- Assign problems via tickets to other teams across the company
- Track new site connections and upgrades.
- 3 shift teams of 3 staff to handle operations, plus 2 staff on the services side and a Team Manager.
- service@ja.net.
Jisc’s Computer Security Incident Response Team helps to keep colleges safe.

- 6,063 security “events” for FE in past 12 months
- each required consideration and impact assessment

We help colleges to:

- avoid cyber security incidents; and
- reduce the impact of incidents.

We monitor the network for signs of cyber incidents and pro-actively work with colleges.
BIS report “2014 Information Security Breaches Survey”

£65k to £115k Average cost to a small business of its worst security breach of the year.

Costs: time to fix the breach, remove infection from computers, deal with questions, inform staff and students, time that systems are unavailable to staff and students.

» Around 300 FE and Skills organisations on the network.

» Assuming just 10% are saved one large incident each year.

» 30 x £65k to £115k
  ▶ Cost saving £1.9M to £3.45M
West Nottinghamshire College

» 15:23 College reports Janet link not working properly
   No backup link
   2,000 students unable to work

» 15:30 CSIRT staff analyse network traffic
   Find a distributed attack on the college from many places across the world

» 16:00 Jisc internet engineers put a number of blocks in place

“The response from Janet CSIRT minimised the disruption to services and allowed normal service to be resumed for the college within a short time”

Andrew Fletcher,
College security contact
Used by 45 colleges.
Estimated annual saving of £450k

Janet Certificate Service used by 328 sites.
Total of 4,354 live certificates.
Estimated annual saving of £85k

Used by 321 sites to access digital content.
Other systems would cost £5k per college per year.
Estimated annual saving of £1.6M
E-mail protection
Used by 67 colleges
Annual savings £1.7M

Systems to keep names on the internet.
Two systems used by 64 and 105 colleges
Annual savings £1.1M

Remaining visible college.ac.uk

We run 376 internet routers for colleges
Annual savings £1.6M
Tower Hamlets College

...had planned power maintenance over a weekend but on restoration, a power surge destroyed their network equipment.

The college was cut off the network and would mean no email and no web presence.

We provided a network presence and a temporary website within 40 minutes.
Cloud services
Amazon, Google, Microsoft O365
Savings around £500k p.a. to date

Telephony over the network
No need for land lines
Free calls between desk and mobiles
One college saved 50% £25k p.a.
Advice and Assistance

Technology Training

Prevent (WRAP3) Training

Legal and Regulatory Information

Technology Advisory Services
See Andrew Cormack blog at:

https://community.jisc.ac.uk/blogs/regulatory-developments/article/safe-harbor-european-court

See Jisc legal advice

For specific agreements we recommend people keep an eye on the relevant Jisc Community groups for updates,

https://community.jisc.ac.uk/groups/microsoft-office-365
https://community.jisc.ac.uk/groups/google-apps
https://community.jisc.ac.uk/groups/file-sync-and-share
https://community.jisc.ac.uk/groups/amazon-web-services-aws
The network in a social context
The end of the Cricket world cup quarter final match between Australia and Pakistan

or...

The eclipse
FA Cup Final - 30th May 2015 (kick off 17:30)
Day after general election - 8th May 2015

Gbit/s

07:02 08:02 09:02 10:02 11:02 12:02 13:02 14:02 15:02 16:02 17:02 18:02 19:02 20:02 21:02 22:02 23:02
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