

A top-down photograph of three students sitting on a wooden bench on a wooden floor. A student on the left is using a laptop. A student in the middle is reading a book. A student on the right is looking at a smartphone. Various school items like bags, notebooks, and a backpack are scattered around them.

17/11/2015

# 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 Eligibility Policy
  - › Who can connect
- » Janet Acceptable Use Policy
  - › What they can do
- » Janet Security Policy
  - › Keep systems secure

- » 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

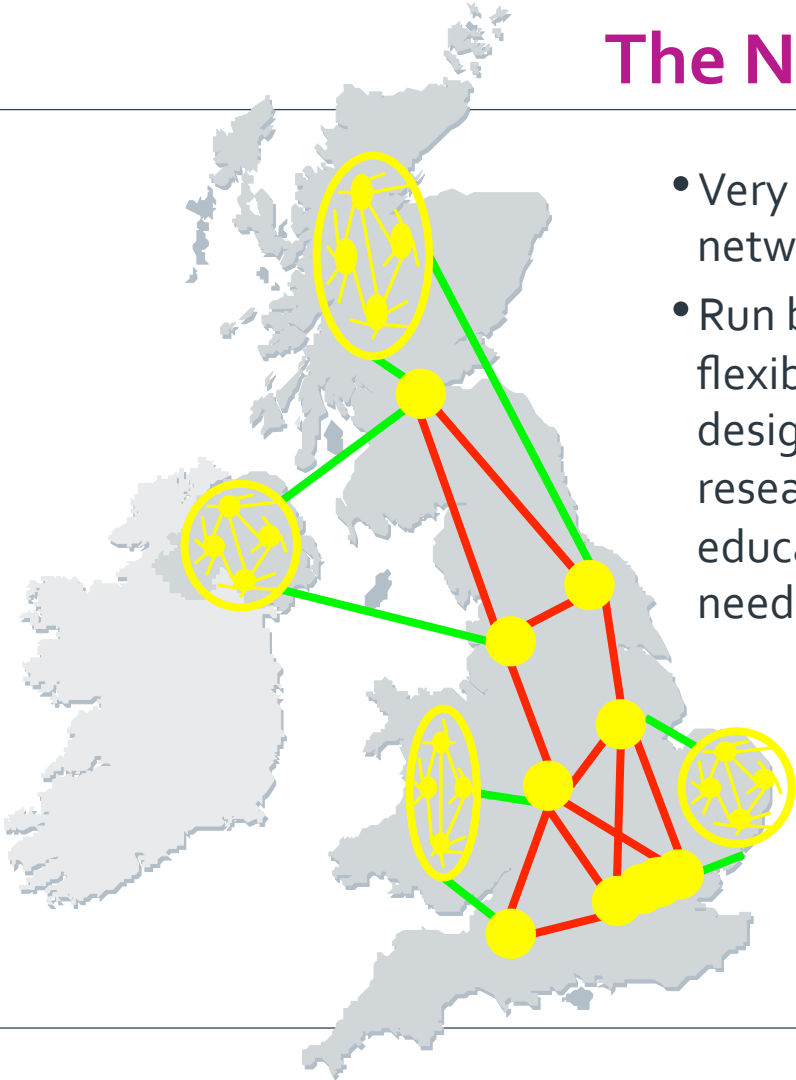
## Jisc Technologies Supported Customers

- » Research Councils
- » Local Authorities
  - › Schools
  - › Normal business
- » Other Organisations
  - › Met Office, ECMWF, EBI, etc
  - › Other organisations that fit Janet Eligibility Policy
- » Janet Connected

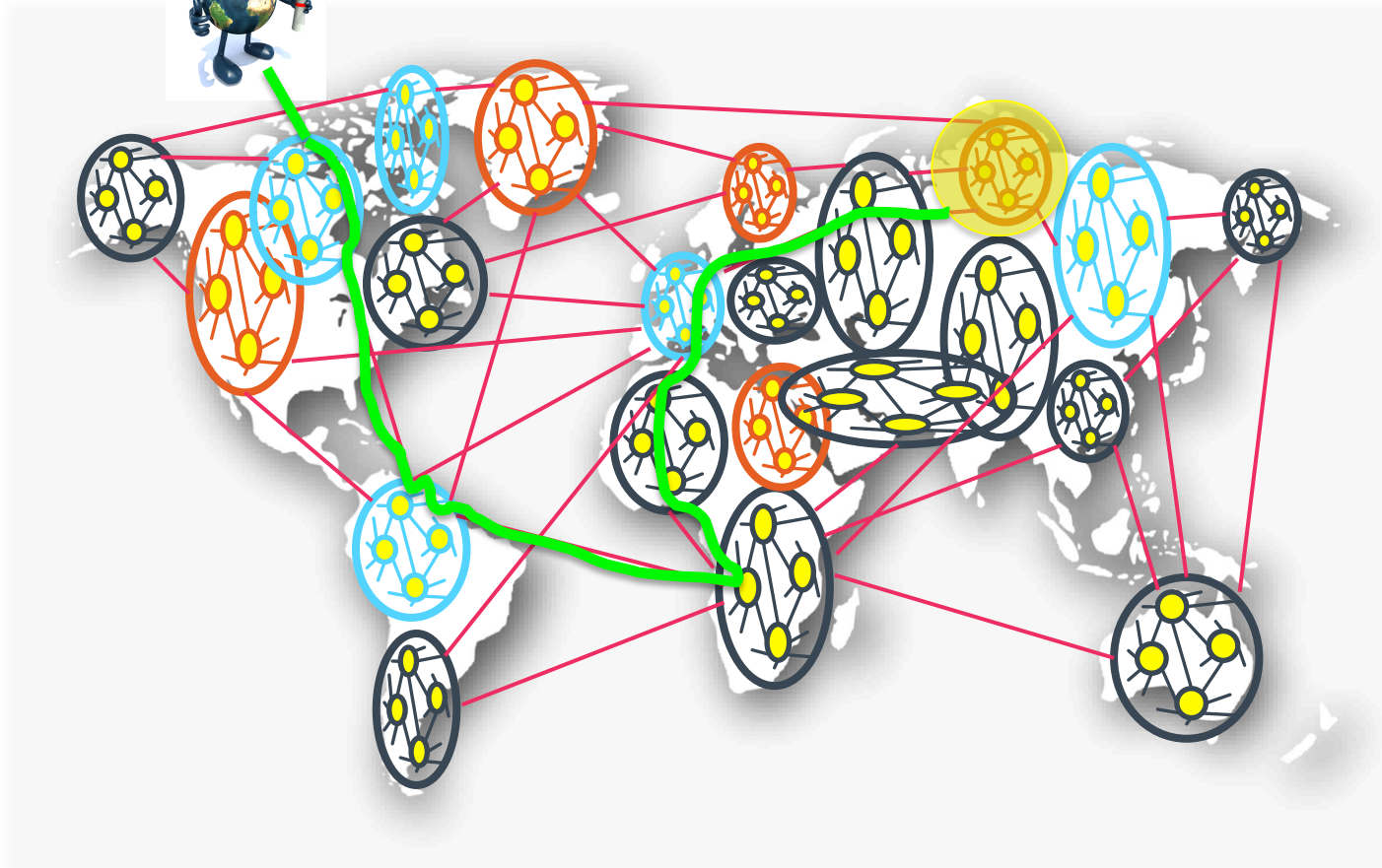
# Janet – the network



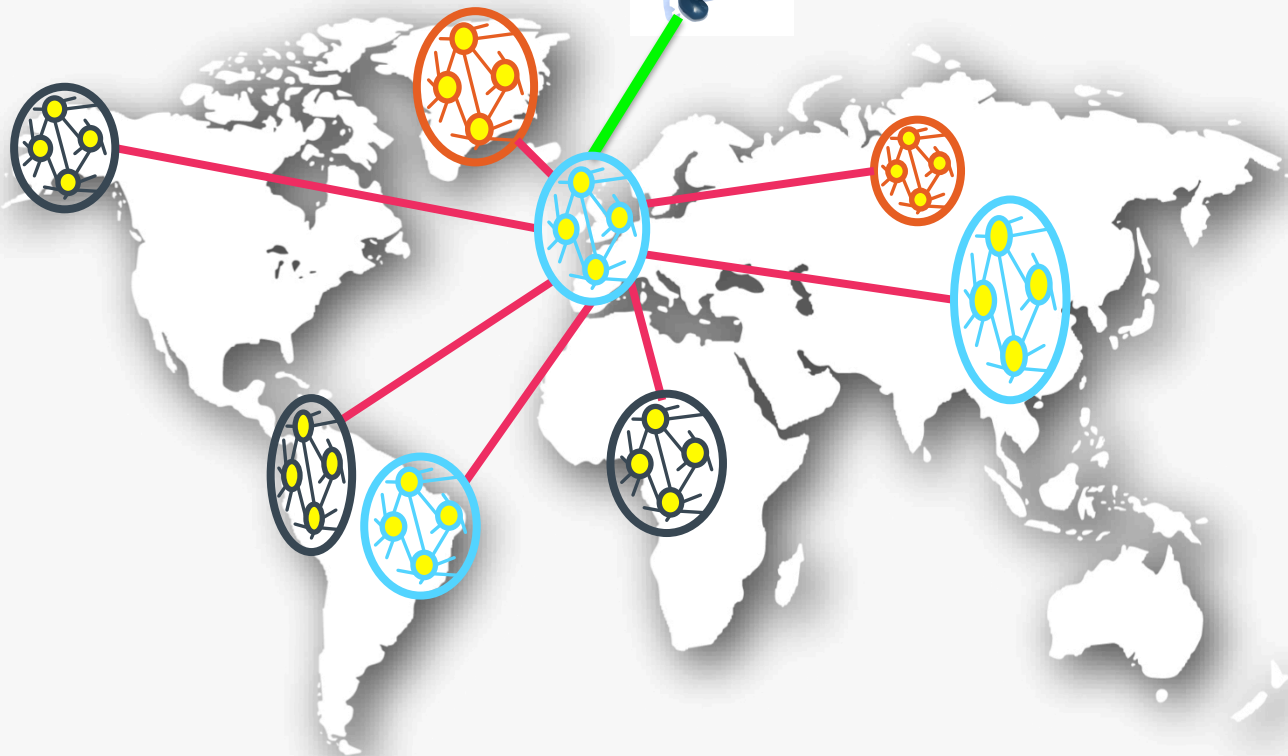
Area	Sites
Higher Education	212
Further Education	520
Local Authority	101
Self-funded	73
Research Council	38
Charity / Funders	25
	969



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



Business  
Academic  
Public



Benefits:

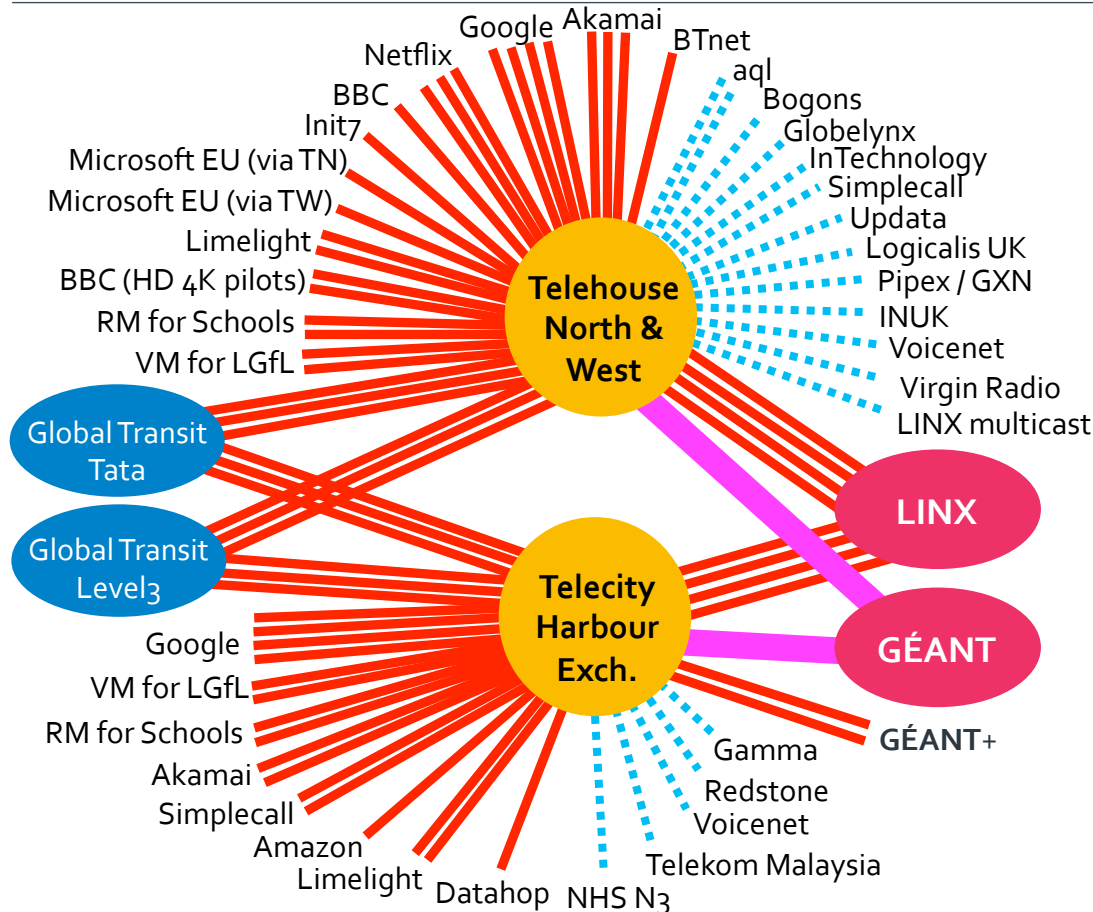
- Security
- Speed
- Cost

Microsoft  
Amazon  
Google  
Virgin  
BBC

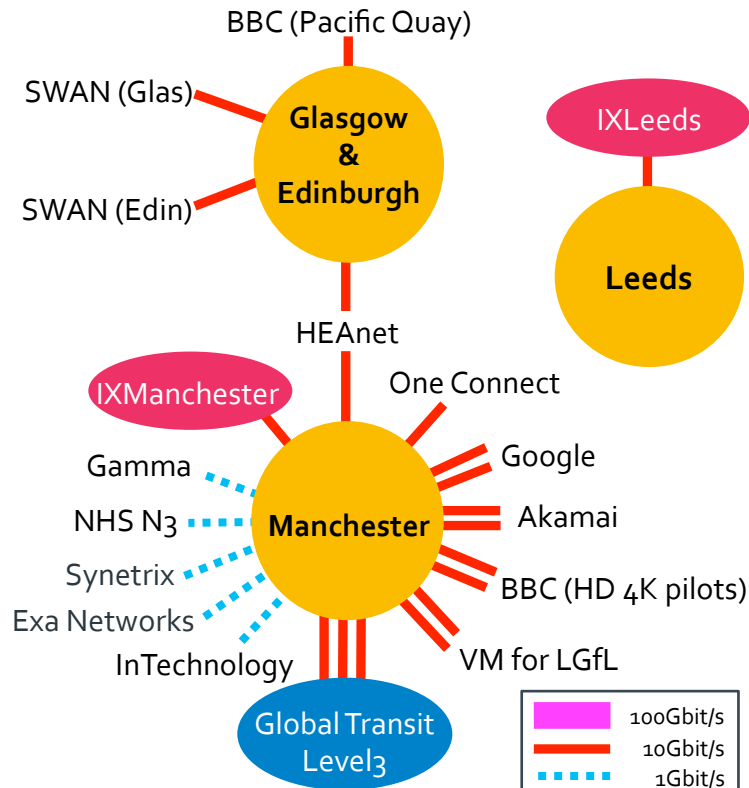
In total >300 networks directly connected to Janet

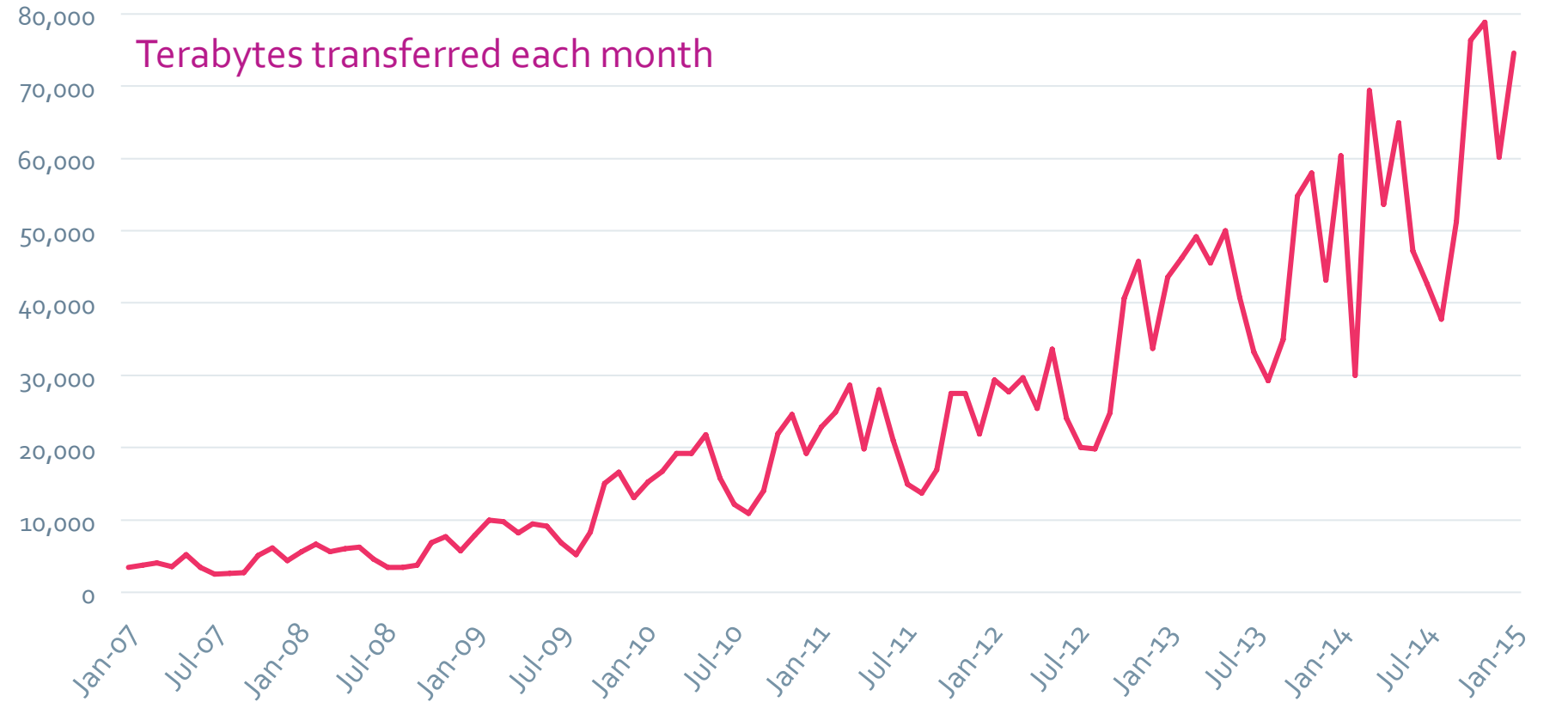
Designed  
for  
research  
and  
education  
needs

# Janet: not just big bandwidth



Total external connectivity > 1Tbit/s







- » 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

- » 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](mailto:service@ja.net).

- » Connecting
- » Advice
- » Security
- » Communicating
- » Infrastructure
- » Research
- » Training
- » Cloud
- » Framework Agreements

- » 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**



UK Access  
Management  
Federation

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](http://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.**





**Technology Training**

**Prevent (WRAP<sub>3</sub>)  
Training**

**Legal and  
Regulatory  
Information**

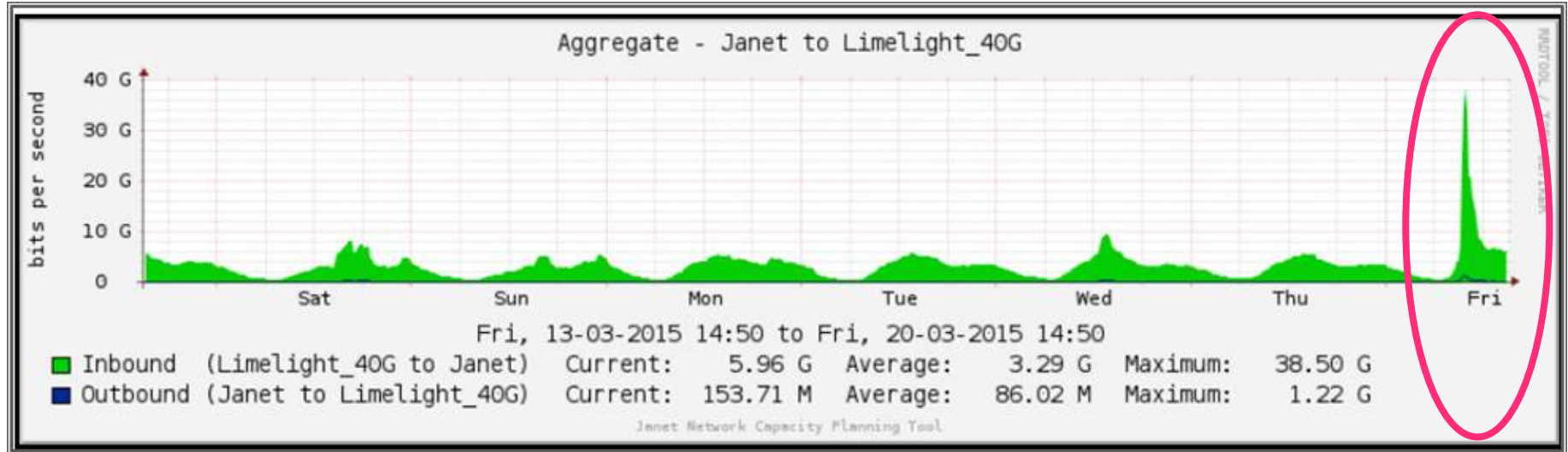


**Technology  
Advisory  
Services**

- » 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

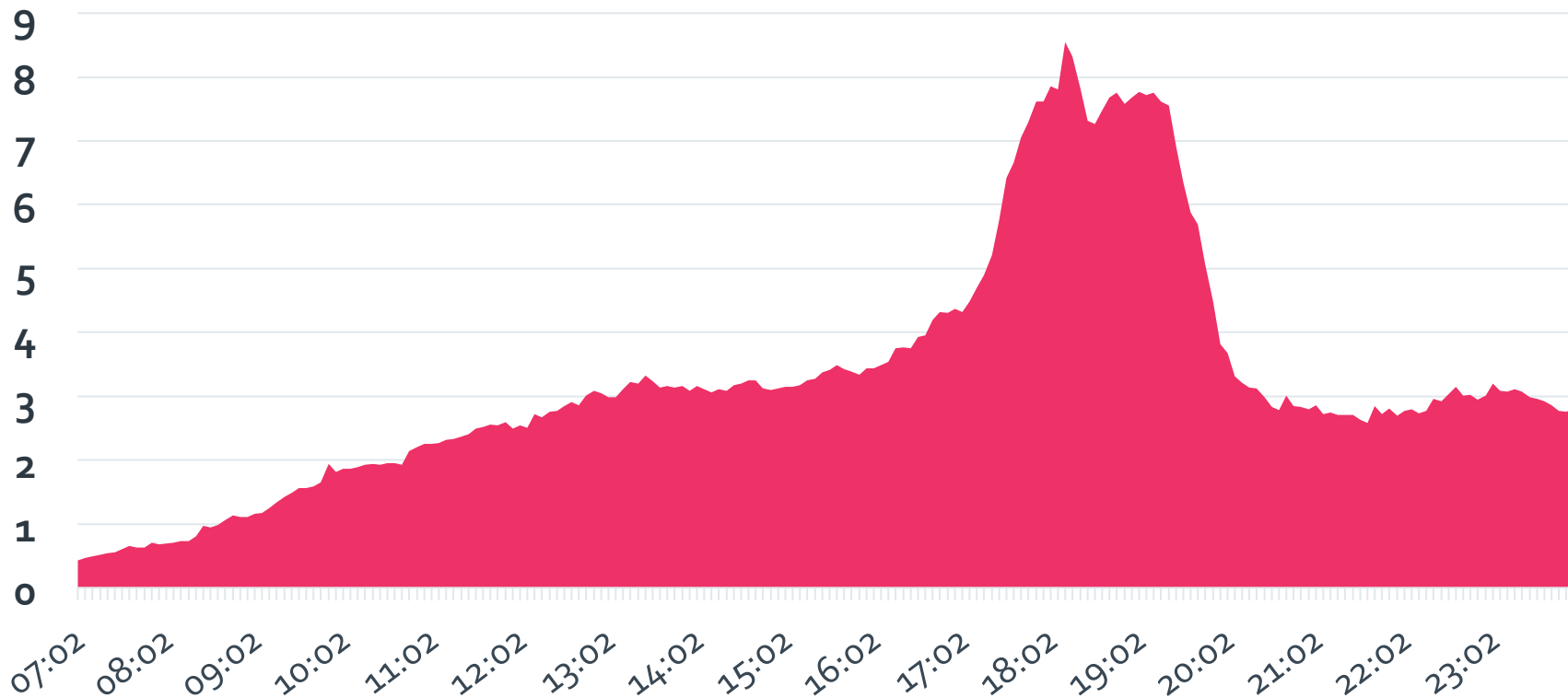


The end of the Cricket world cup quarter final match between Australia and Pakistan or...

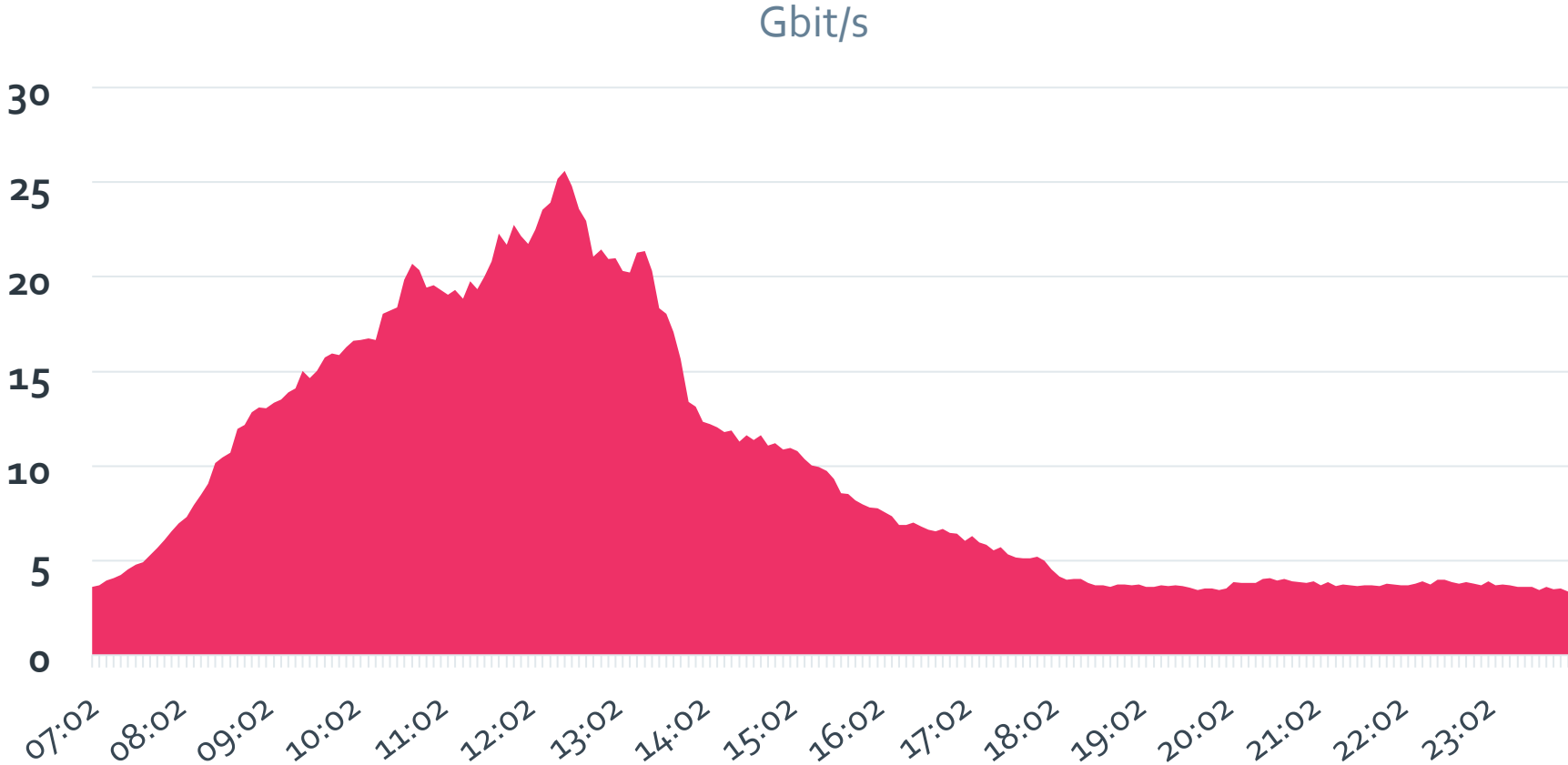
The eclipse

## FA Cup Final - 30th May 2015 (kick off 17:30)

Gbit/s



# Day after general election - 8th May 2015



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