Janet Tech 2 Tech: Janet Network Services

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Agenda

• Overview
• Network Services
• Sources of help and advice
• Upcoming network services
• Discussion
Janet Network Services

Which services do we provide to members?
Overview

Jisc’s network and network-related services

• The membership section on the Jisc web site lists all services available to members, for HE, FE and research organisations
  • [https://www.jisc.ac.uk/membership](https://www.jisc.ac.uk/membership)

• These show which services are included with your membership subscription, and which are (paid) optional additional services

• We’ll cover network-specific services in the following areas:
  • Connectivity
  • Cyber security – cyber is implicitly network
  • Trust and Identity – for domains and certificates
  • Cloud
Connectivity

Meeting your connectivity needs. Whether that’s connecting to the Janet Network, special purpose connections or supporting access and roaming
Connectivity (1)

Janet IP connection

• Providing your IP connectivity to Janet and beyond
  • [https://www.jisc.ac.uk/janet-ip-connection](https://www.jisc.ac.uk/janet-ip-connection)
  • Our ongoing [access programme](#) is updating the infrastructure used
• Capacity – “designed to meet your growing and dynamic needs by offering capacity headroom over and above the capacity you require”
  • Sites are provisioned according to need and budget
  • The largest site (RAL) is connected with 2 x 2 x 100G (IP)
• IP address assignment (IPv4 and IPv6)
• Various resilience options are available

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Connectivity (2)

IPv6

• Supported on the Janet backbone for ~20 years
• IPv6 is included with your Janet IP connection
  • [https://www.jisc.ac.uk/ipv6](https://www.jisc.ac.uk/ipv6)
• Provisioned to your doorstep, alongside IPv4
• Up to you to choose to use it – see our advice and guidance:
  • [https://www.jisc.ac.uk/guides/how-to-begin-an-ipv6-deployment](https://www.jisc.ac.uk/guides/how-to-begin-an-ipv6-deployment)
• The first step is to request IPv6 address space
Connectivity (3)

Netsight

• Comes with your Janet IP connection
  • https://www.jisc.ac.uk/netsight
• Shows various measurements:
  • Traffic level in/out
  • RTT (by ping, with caveats)
• Data is exportable
• User based accounts
  • https://netsight3.ja.net/view/registration-form/
Connectivity (4)

Managed Router Service

• Provision, management and support of your site border router
  • [https://www.jisc.ac.uk/managed-router-service](https://www.jisc.ac.uk/managed-router-service)

• Service aimed at smaller sites
  • Around 700 sites using the service

• The router can support connections provisioned at bandwidths of 1Gbit/s, 2x1Gbit/s, 10 Gbit/s or 2x10 Gbit/s

• Various levels of resilience can be added – see the web info

• Jisc manages the devices through automation with Ansible
Connectivity (5)

eduroam / govroam

• Provides support for user roaming between WiFi networks using only their home organisation credentials, where eduroam is deployed
  • [https://www.jisc.ac.uk/eduroam](https://www.jisc.ac.uk/eduroam)
• Your site peers with the national eduroam proxy service to allow relaying of logins from your visitors to their home authentication servers
• Your users and visitors just see seamless WiFi access
• Can be used to just support a ‘visited only’ site

• There is also govroam for government organisations
  • eduroam sites are encouraged to add govroam ‘visited only’ support to enable local collaboration with public sector organisations

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Connectivity (6)

Network equipment framework

• A framework agreement for the supply and support of wired and WiFi network equipment
• Can help make procurement simpler for you, and offer savings
• A fairly wide range of equipment is included through ‘lots’, see:
  • [https://www.jisc.ac.uk/network-equipment-framework](https://www.jisc.ac.uk/network-equipment-framework)
• All lots have a buyer’s guide to help you
• All post-sale support and maintenance services are fully covered under the agreement including software development
• The framework has been extended until 30 September 2023
Connectivity (7)

Other services not included in the subscription:

• Cloud Connect: AWS / Google / Microsoft
• eduroam Visitor Access (eVA)
• Global education access framework
• Intersite connection
• Microsoft Azure ExpressRoute
• Netpath – point to point connection – ‘plus’ or ‘classic’ versions
• Session Border Controller

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Cyber security

To help you get the most from your Jisc membership, we work to protect the Janet Network and connected organisations
Cyber security (1)

A wide range of services included with membership:

- Allow and deny lists
- Cyber threat intelligence
- Foundation DDoS mitigation
- Email advice and testing
- Janet network CSIRT
- Janet network resolver (with RPZ protection)
- Network time service (NTP)
- Primary nameserver service
- Secondary nameserver service
- Security operations centre
- Simulated phishing and associated training framework
- Vulnerability assessment service and tools supply framework
- Web filtering and monitoring framework
Cyber security (2)

Other cyber security services not in your subscription:

• Cyber essentials
• Critical services protection
• Cyber security assessment
• Cyber security financial X-ray
• Managed SIEM
• Penetration testing
• Splunk
Trust and Identity

Providing you with seamless and secure access to services and resources, enabling you to manage access more effectively and efficiently.
Trust and Identity services

Some of our T&I services are network service-related:

• Certificate service
  • SSL, email and other certificates
  • https://www.jisc.ac.uk/certificate-service

• Domain registry
  • Jisc manages .ac.uk
  • https://www.jisc.ac.uk/domain-registry
  • Can register project domains, but do consider long term curation
Cloud

We act for the whole of UK education and research to bring you competitive cloud solutions to help you achieve your strategic goals
Cloud (1)

Cloud services

• Managed AWS / Azure / Microsoft 365
• OCRE cloud framework
• OCRE and AWS
• Cloud consultancy
• Cloud professional services
Cloud (2)

Other related services

• Janet txt framework
• Shared data centre framework
• Telephony DPS
• Managed web site protection

• JiscMail – free to use email list service
Sources of help and information

Where else can I find more information?
Network status

Where can I get info on the network status?

• Netsight traffic light system (top level available without sign in)
  • [https://netsight3.ja.net/view](https://netsight3.ja.net/view)

• Major incidents - @JiscMI twitter

• We send trouble tickets via email to site tech contacts
  • We check these once per year
  • Let us know if your contacts change

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Jisc events

Our network-related events

• Two annual network-related flagship events
  • Networkshop – next is 8-10 June 2022
    • https://www.jisc.ac.uk/networkshop
  • Security conference – date for next event not yet set
    • https://www.jisc.ac.uk/security-conference

• Our Tech2Tech event series
  • This is one! Usually around 1-2 a month
  • Focus on one topic, or an update on our access programme
  • See https://www.jisc.ac.uk/get-involved/tech-2-tech
Network performance assistance

Helping you optimise use of your Janet connectivity

• We are happy to discuss network performance with members
  • e.g., on Science DMZ principles for large scale data transfer
  • Beware results achieved with tools like speedtest

• We offer a range of test facilities
  • iperf server
  • perfSONAR server – collects measurements over time
  • Data Transfer Node (DTN) with transfer tools, e.g., Globus
  • All currently 10G, adding 100G capability soon

• Feel free to ask more by email to netperf@jisc.ac.uk
Other useful sources

Useful links

• Blogs - https://www.jisc.ac.uk/rd/projects/shaping-the-future-of-janet
• JiscMail lists, e.g., uk-security, wireless-admin, ipv6-users, janet-development
• Advice and guidance – https://www.jisc.ac.uk/advice
• Slack channel – to join use this link
• eduroam clinic – usually 1st Tuesday of every month
• Policies – see http://ji.sc/policies
• Jisc R&D projects - https://www.jisc.ac.uk/rd/projects
• Consultancy – cloud, T&I, eduroam - https://www.jisc.ac.uk/consultancy
Upcoming services?

What’s in the pipeline?
COMING SOON: Managed firewall service

Current status

• Our procurement to select an operating partner with which to launch a new managed firewall service has been successful and an announcement will be made soon

• The service will be Jisc led, applying our knowledge of research and education, organisations’ connectivity needs and requirements to help tailor the service

• We hope to have product available in the ‘summer’

• Further info available on the [project R&D page](#)
COMING SOON: Sparkroam

Sparkroam

• Applying eduroam principles to science parks and innovation centres
• May be relevant if you have a science park near campus, or host an innovation centre or business incubator on site
• Currently launching a beta
• No online info yet
• Get in touch if you’d like to participate – andy.logan@jisc.ac.uk
Other network services?

Are there additional services you would like us to provide?
Additional services?

What might be useful to you?

• We track technologies so we can look to provide new services just ahead of demand, for example:
  • IPv6, long ago!
  • Session Border Controller (SBC), our most recent new service

• We are also very keen to hear from members which additional services we could provide that would be of value to them
  • What’s missing?
  • What else would you like to see?
Thank you

• For further help or questions
• Read the Jisc service pages
• Contact us: help@jisc.ac.uk
• Or contact your Account Manager
  • See https://www.jisc.ac.uk/contact/your-account-manager

• See you at Networkshop 50, on 8-10 June 2022 in Nottingham
• Registration is open
  • https://www.jisc.ac.uk/networkshop