Access routers at Janet sites

- Interfaces
- Router setup and the Janet Netsight Service

Customers are expected to have an on-site IP router to connect their LAN to Janet. The choice of router will be determined by the capacity of the access link and the organisation's specific requirements. Organisations requiring informal advice on router products that have been successfully used by other sites on Janet should contact the Janet Service Desk [1] for assistance.

The majority of FE colleges connecting to Janet under recent Government initiatives were supplied with a router as part of their new connection package. The JISC RSCs configured most of their routers and assisted in bringing their connections into operation.

[2]
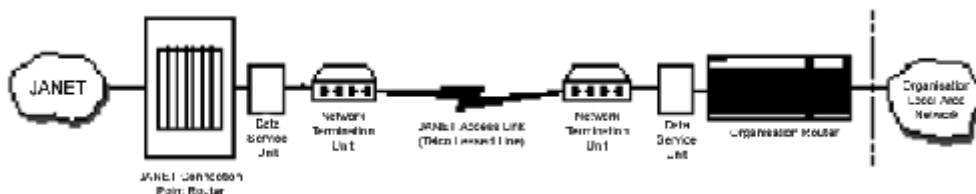
As part of the process of setting up the router, customers need to select a suitable link-level protocol to carry IP traffic over the access link between their router and the router on the Janet core. The process of routing across the access link is sometimes referred to as encapsulation. Two link-level protocols are supported for an IP connection across Janet:

- PPP (Point to Point Protocol)
- HDLC (High Level Data Link Control).

All organisations connecting to Janet are required to confirm which method of encapsulation will be used, by completing the appropriate section of the JCUR form.

Interfaces

The customer's access router needs a suitable WAN interface to connect to the Janet access link. If the bandwidth of an organisation's connection is 2Mbit/s or less, the PTO will normally present the leased line at the site's NTU with an X.21 DCE interface. Most routers are compatible with this type of interface and it should be possible to connect the circuit interface to the access router with an X.21 cable.

If it is not possible for the PTO to deliver a 2Mbit/s connection with an X.21 interface, the leased line will be presented at the NTU with a G.703 interface. This type of interface may also be used for 34Mbit/s connections. In these circumstances however, it will be necessary to install a DSU converter between the G.703 interface and the interface on the access router.

Organisations requiring a DSU will be supplied with a recommended box and a pair of three metre coax cables to connect it to the telecommunications termination point. If longer cables are required, the installation contact should give the Janet Service Desk [1] prior notice of the length needed. The connecting organisation is responsible for the provision of an X.21 cable to connect its routing equipment to the DSU. The cost of the DSU and cables may be included in the connection package or charged separately, depending on the funding arrangements for the connection.

Once the connection is operational, the DSU becomes the property of the connecting organisation, which then assumes responsibility for arranging suitable maintenance cover for the DSU and cable. If there are any faults on the DSU or cable after it has been installed, the organisation is responsible for any repairs.

However, for FE colleges the DSU maintenance arrangements may vary. The organisation responsible for maintaining the site router is usually also responsible for maintaining the DSU.

It is acceptable for a connecting organisation to purchase and install a DSU on-site. However, the DSU must match the unit installed at the Janet Point of Presence and the organisation must also purchase all of the cables required. The Janet Service Desk can provide details of recommended DSU equipment for use on Janet.

Additional information about interfaces may be obtained via the Janet Service Desk. FE and specialist colleges may consult their JISC RSC if they require further advice.

Router setup and the JanetT Netsight Service

Organisations that have received assistance from contractors in setting up their access router should be aware of the requirements of the Janet Netsight network monitoring system. In order to monitor access links, the Janet NOC and the RNOs need to ping the IP address of the router interface that supports the customer's access link. A small number of sites have in the past set up routers that do not respond to pings. Please note that if a site router is set up in this way, there will be problems in providing the link status and traffic statistics via Netsight. There may also be time delays in identifying faults on these access links.

Janet(UK) and the RNOs will be happy to discuss which IP addresses should be allowed to ping a site access router. Please contact the Janet Service Desk [1] for further information. FE and specialist colleges may initially seek advice from their JISC RSC [3].

Source URL: https://community-stg.jisc.ac.uk/library/janet-services-documentation/access-routers-janet-sites

Links
[1] mailto:service@ja.net
[2] http://community.ja.net/sites/default/files/routers.gif
[3] http://www.jisc.ac.uk/whatwedo/services/as_rsc/rsc_home/rscs_contact.aspx