

VPN on Janet

Janet provides its users with a *basic transmission service*, which is a regular IP best-effort service. Every packet is treated alike, with the same chance of being delayed or dropped if network congestion occurs. However, network applications available to Janet users may benefit from enhanced transport services. For example, multimedia applications like IP videoconferencing and VoIP may benefit from enhanced network performance (for example lower latency and delay variation parameters than are available from IP best-effort) that IP QoS could provide. Multicast transport could also save bandwidth on low-speed links.

Currently Janet supports several prototype or experimental enhanced transport services, including multicast, IPv6 and QoS. Another candidate IP technology for consideration is VPN.

The commonest form of VPN in use within the Janet community is a user-provisioned encrypted VPN, meaning that the VPN is provisioned by the computer service staff of a Janet-connected organisation. This kind of VPN provides secure access to the networked resources of an organisation (a university, a college etc.) for its remote users. There is not currently a central VPN service (i.e. a service centrally managed by the Janet NOC or RNOs) on Janet.

We would like to investigate:

- what requirements, if any, does the community have for centralised Janet VPN services, and what type of service could be implemented?
- possible scenarios of VPN use within the Janet community
- would the balance between the benefits of centralised VPN services and the cost of their deployment/maintenance justify deploying them as Janet production services?

The first step in this investigation was the VPN survey which UKERNA conducted

in March-April 2006. They showed that the Janet community has a significant interest in VPN services in general but no strong demand for centrally managed VPN services. Taking this survey result into account, centrally managed VPN services will not be deployed across Janet in the foreseeable future. However, if demands for such services arise within the Janet community then this area may be explored further.