

## eduroam in a Nutshell

*Page updated 26/09/2022*

[Back to](#)

[home page](#) <sup>[1]</sup>

**For Wi-Fi users, eduroam is simply the most secure, easy to connect to and ubiquitous roaming Wi-Fi internet access service there is. For the organisation, not only is it free(\*) to be a member of the eduroam(UK) club, but eduroam is widely acknowledged to represent the best practice model for the provision of wireless network services** - particularly for communities of organisations characterised by a high degree of co-operation and collaborative endeavour, such as the research, education, learning and cultural community - both nationally and internationally. This doesn't mean that eduroam is a one-size-fits-all system however, it can be adopted by fully engaged 'home and visited' partners or by organisations wishing simply to support the knowledge economy or even just to increase footfall at venues or in public buildings and metropolitan spaces. **It can even be deployed alongside other Wi-Fi services such as captive portals.**

**Seamless connectivity** - eduroam serves to facilitate the secure connection of mobile devices of users from member organisations to the internet network services of both their own organisation and those of other member organisations, seamlessly. Organisations may participate in order to provide this mutual benefit for their own users or in cases where the organisation does not have any eduroam users itself, it may wish to provide a service for visitors (for instance a library, museum, gallery, conference centre, public building, hospital, transport hub or a student hall of residence).

**Wide eligibility** - Whilst originating in the higher education sector, eduroam has evolved to meet the needs of the whole education, research, learning and culture sector and has been widely adopted outside of the core HE and FE communities. You will find eduroam at many NHS hospitals and increasingly in local authority venues such as libraries. The service is funded from public sources and publicly funded organisations and charities are welcome to participate, but equally, commercial organisations where the provision of eduroam serves the public interest or indeed where the commercial organisation is contracted to provide services to a member organisation, may also participate.

**Ubiquitous yet secure** - By participating in eduroam(UK) organisations can add streamlined connectivity for visitors from the community and Wi-Fi roaming capability for their own users, gaining them access to 10,000s of eduroam locations worldwide and by fully embracing the technology, organisations can benefit from the security and network access flexibility offered by 802.1X.

**Participation service, not a subscriber service** - in order to participate in eduroam organisations will need to deploy a RADIUS service. But adoption of eduroam need cost no

more than any other Wi-Fi solution and in fact eduroam is estimated to already deliver circa £2m cost savings per year to the FE & skills sector in the UK, through reduced overhead on service maintenance and support together with a further £800K in productivity gains by users. With the current rate of membership growth in this sector, together with wider participation by the public health and other sectors, this figure is set to continue to grow.

**From the perspective of the individual** used to disparate local cafe/hotel services, insecure commercial/local authority hot-spot services and home Wi-Fi services using various log on methods (open, registration, PSK code), eduroam is simply the 'Rolls-Royce' service and increasingly it is taken for granted it will be available. The one 'eduroam' profile on their devices, the same set of Wi-Fi settings and credentials, just works everywhere - equally at the home organisation and when roaming.

**Advantages for all** - With its huge service footprint throughout the research and education community the key advantage offered by eduroam **for its users** is the secure authentication mechanism which delivers 'switch on and you are connected' performance wherever they go.

But the benefits of eduroam do not stop there - **for organisations** it provides:

- Best practice network access control solution; 802.1X, on which eduroam is based, is a well established technology, acknowledged as providing top level security.
- Automated user-device setup - eduroam's Configuration Assistance Tool solves the problem of user device setup provisioning.
- Audit trail in the form of authentication logging and IP address allocation, enabling compliance with Janet/your own security policy.
- Capability to tailor the network service provided according to user type - perfect for supporting users connecting with their personal devices and smartphones.
- Improvement of the efficiency of your Wi-Fi service by reducing the number of SSIDs needed.

**How to start** - To benefit from eduroam an organisation simply needs to join the eduroam(UK) federation and enable 802.1X technology through its existing infrastructure. To help with this, Jisc provides a range of tools together with training and technical support. To find out more, see <https://www.jisc.ac.uk/eduroam> [2], [www.eduroam.org](http://www.eduroam.org) [3] and other pages on this Community site such as '[Getting started](#)' [4].

(\*) At the time of writing, membership of the eduroam(UK) federation is free to eligible organisations; there are costs associated with eduroam implementation and operation, but these are minimal and similar costs would be incurred for any network access control system.

---

**Source URL:** <https://community.jisc.ac.uk/library/network-and-technology-service-docs/eduroam-nutshell>

#### Links

[1] <https://community.jisc.ac.uk/library/janet-services-documentation/eduroam>

[2] <https://www.jisc.ac.uk/eduroam>

[3] <http://www.eduroam.org>

[4] <https://community.jisc.ac.uk/library/network-and-technology-service-docs/eduroam-nuts-and-bolts-learn-more-and-get-started>