

Technical aspects of integrating a WiFi network into the wifi.italia.it project

The basic technical idea of the project is to have an APP on the user's mobile phone that recognizes and interacts with a single 802.1x SSID (which all networks must therefore open to participate in the federation) called "wifi.italia.it" and configured so as to refer to an external and unique Radius Authentication Server of the wifi.italia.it project.

The network that wants to federate will then have to configure the Access Points to which the APP is connected, so that they send Radius requests to a central server. It is necessary that these requests come from a single IP and for this reason, depending on the configuration and architecture of the network that you want to federate, it may therefore be necessary to install a controller or a Proxy Radius that concentrates and manages these requests.

Furthermore, during integration, it is necessary to communicate to the wifi.italia.it technical group some Access Point data to be federated, including the location, the name of the hot spot to which they belong and the MAC Address.

Finally, the federated network must provide a URL in which it will publish references to the content (an image, a short text and a web link) which will be shown by the APP when the user is connected to an access point of the federated network.

According to this architecture, the APP and the wifi.italia.it system manage, in addition to the first (and only) user registration, the authentication of the same on the guest network in a totally transparent way for the user. Once the user is authenticated with the APP the navigation is totally managed by the network that is "hosting" it at that time.

Consequently, the APP and the wifi.italia.it system collect and manage the user registration data (anonymizing them and only for the execution of the service as clarified in the terms of service and privacy information of the APP) and those relating to their authentication on federated networks. The navigation data are instead collected and managed exclusively by the federated networks according to the methods specific to those networks.