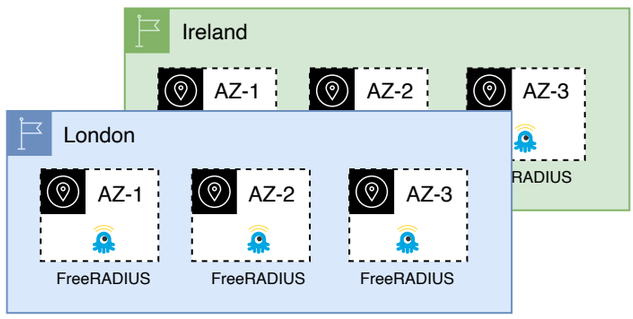
Service architecture

GovWifi service relies on a resilient architecture built within the AWS Cloud.

The authentication service, based on the FreeRADIUS product, is deployed across two AWS Regions: London and Ireland.

Multiple Availability Zones (AZ) are used within each region to offer further resilience.

Participating organisations are asked to use FreeRADIUS servers from both regions.



Service components

To reduce the service complexity and provide high availability, GovWifi service utilises managed AWS components like:

- Network Load Balancers,
- ECS Fargate
- Relational Databases Services (RDS) in Multi-AZ deployment

GovWifi's datasets are backed up daily in line with the NCSC's 3-2-1 guidelines.

Infrastructure and application code management

GovWifi infrastructure is defined as "Infrastructure as Code" and stored in version controlled repositories in GitHub.

GovWifi applications are also stored in GitHub and deployed using a Continuous Integration and Continuous Deployment using tools like GitHub Actions and AWS Developer Tools.

This approach allows the team to rollback changes quickly if required.

Incident Management

In the case of an incident, the GovWifi team follows an internal Incident Management process ensuring the issue is prioritised and resolved.

The GovWifi team has an out-of-hours support agreement to address P1 incidents.

In the unlikely case of both AWS regions being unavailable simultaneously, the GovWifi team will follow the internal Business Continuity Plan (BCP).

While the GovWifi team works on the service restoration, participating organisations may be asked to follow their internal business continuity procedures.