Responsibilities of a govroam regional federation operator

Background

The govroam service is as much a fabric of trust between participant organisations as it is a technological artefact. Whilst fundamentally every member of govroam contributes guest connectivity and an authentication and support infrastructure, pragmatically it is more effective to aggregate these subunits into larger so-called regional federations (RFs) that provide mutual support, and partition roaming authentication traffic appropriately for the majority ‘local’ case. These regional federations are brought together by a nominated regional federation operator (RFO), the entity with whom Jisc deals on behalf of the whole regional federation. With this document, Jisc aims to clarify the duties involved in being an RFO.

1. RADIUS hierarchy

The RFO is responsible for operating the ‘top level’ RADIUS proxy for its RF, known as the regional radius proxy server (RRPS) – see section 2.3.1.1 and 2.3.1.3 of the Service Definition document. It maintains the link between this top level RADIUS server and Jisc’s national infrastructure, and is required to achieve 99.5% availability outside of maintenance. However complex the proxying arrangements within the RF, the RRPS aggregates the proxying routes from all the RF member’s organisational RADIUS servers (ORPS), and ultimately is the point of contact to all the other RFs in the UK via the Jisc national RADIUS proxy servers (NRPS). The operation of this top level RADIUS function for the region may be directly by the RFO, or under contract to a third party (as long as the RFO can still meet its obligations in timely fashion through the subcontracted route).

The configuration of the RADIUS servers at participating RFOs and member organisations is key in maintaining the overall security of the service, and Jisc reserves the right to audit the operational status of these servers and request changes if required to maintain the integrity of govroam.
2. Support Levels

The RFO is required to monitor and report against a number of SLAs.

Firstly, to ensure availability of the govroam service to all participants, the RFO must deliver their top level regional RADIUS proxy to at least 99.5% uptime (excluding notified scheduled maintenance), and that the RADIUS infrastructure of their Members is delivered to the same availability.

Secondly, the RFO must track the time taken to address, fix and escalate issues within the proxy hierarchy in their region at various levels of severity, and in cases of high severity or extended time-to-fix take the lead in resolving the issue, as indicated below:

<table>
<thead>
<tr>
<th>Severity 1</th>
<th>Severity 2</th>
<th>Severity 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple member organisations complete loss of service</td>
<td>Individual member organisation complete loss of service</td>
<td>Degraded or intermittent service</td>
</tr>
<tr>
<td><strong>Member to RFO</strong></td>
<td><strong>RFO to Jisc</strong></td>
<td><strong>RFO to Jisc</strong></td>
</tr>
<tr>
<td>1hr response &amp; inform Jisc; 4hrs to fix; &gt;4hrs escalate to RFO</td>
<td>1hr response &amp; inform Jisc; 4hrs fix; &gt;4hrs escalate to Jisc</td>
<td>8hrs response; 5d fix; &gt;5d escalate to RFO</td>
</tr>
<tr>
<td>4hrs response &amp; inform RFO; 2d fix; &gt;2d escalate to RFO</td>
<td>4hrs response &amp; inform Jisc; 2d fix; &gt;2d escalate to Jisc</td>
<td>8 hours response; 5d fix; &gt;5d escalate to Jisc</td>
</tr>
</tbody>
</table>

**Example:** If an individual Member organisation in a federation lost govroam capability, the incident would be classified as Severity 2, and that Member would be required to respond to the problem (implement a temporary fix, initiate further investigation etc.) within 4 working hours, with a target to completely resolve the problem within 2 working days. If the problem is not completely resolved within 2 working days, the Member organisation is required to escalate to their RFO (if they are not already liaising with them) and the RFO takes the lead in further investigations, responding to the Member’s referral within 4 working hours and notifying Jisc that a Sev2 incident had exceeded its initial time-to-fix. If after a further 2 working days the RFO has not been able to resolve the issue, they must escalate to Jisc for further work.

Note that the SLA specified here is under review.

3. Monitoring, diagnostics and metering

The RFO plays a role in monitoring the performance and availability of the ORPSes within it’s RF, both by sharing relevant data with Jisc and by independently monitoring roaming events within its own RF. The RFO works alongside Jisc in providing advice to its member organisations around optimising their ORPS. The degree and mechanism(s) for this data gathering and support are a matter for local agreement within the RF, but there are certain minimums that the RF has to comply with set within the Jisc terms and conditions signed by the RFO – see Contractual arrangements below and section 2.3.3.1 of the service definition.

Tools available to support this role include RADIUS-based heartbeat monitoring and remote syslogs such as F-Ticks.
An RFO would typically offer a website providing summary usage statistics for govroam in their region, plus membership data, and capturing any interesting use cases supported in their RF.

It is strongly recommended that federations that anticipate change that will carry them past a tier boundary in the year ahead opt to pay monthly rather than annually in advance, to avoid losing any advance payment made.

4. Contractual obligations

Jisc has a contractual relationship with the RFO in order mutually to ensure effective governance of the service as a whole. The RFO is required to bind the members of their regional federation in turn into a similar legal relationship with them such that they as operator can enforce the responsibilities described in the terms and conditions that they’ve signed. These include (but aren’t limited to):

» Maintaining and sharing accurate and up-to-date data about service usage
» Holding all necessary licenses, authorisations and permissions required to meet its obligations
» Complying with the service technical specification
» Observing good practice around operations, security and data handling of their instance of the service
» Protecting the reputation of the service
» Assisting other members, the RFO and Jisc in the investigation of problems and misuse

Schedule 1 of the Jisc Terms and Conditions document provides a sample template of an agreement that an RFO could use with its RF members.

If any breach of the T+C’s by the RFO or one of its RF members is not resolved within 20 working days of notice, govroam membership may be withdrawn.
5. Support coordination

The RFO must provide staff resource to maintain its RRPS; contribute to Jisc’s support of submitted trouble tickets by providing RF-specific information as required; and provide business-to-business level technical support to its member organisations in resolving govroam issues. For this latter point, the RFO is the first escalation point if a home organisation and a visited organisation cannot resolve a roaming issue between each other. If the RFO is unable to resolve the issue, escalation to Jisc at the national level is possible – see section 2.6.1.3.2 of the service definition.

In the event of a significant govroam security incident, the RFO would represent its member’s interest in dealing with Jisc’s CSIRT. Jisc CSIRT would be the primary contact for blue light services and media until the incident is resolved.

The RFO is responsible for collating an up-to-date list of the technical contacts for all its member organisations and providing this to Jisc.

6. Financial arrangements

Jisc bills the RFO either annually in advance or monthly in arrears, at the RFO’s choice, against a published tariff that is reviewed annually. It is a local decision for the RFO whether to divide those charges among the membership of their RF, and if so how to manage their recovery.