

ForgeFlux

External Federation for Software Forges

Aravinth Manivannan | @realaravinth

Federated Ecosystem: a pipe dream?

- 1) Federation is six times harder than centralized designs
- 2) Lack of participation from major vendors

Projects participating in the discussions have included:

- Federated Networks Association
- Git-Dit
- GitLab
- Gitea
- Gogs
- NotABug
- Pagure
- Peers Community
- SocialHome
- sr.ht
- Vervis

Source: <https://notabug.org/peers/forgefed/>

ForgeFlux Approach: External federation, native UX

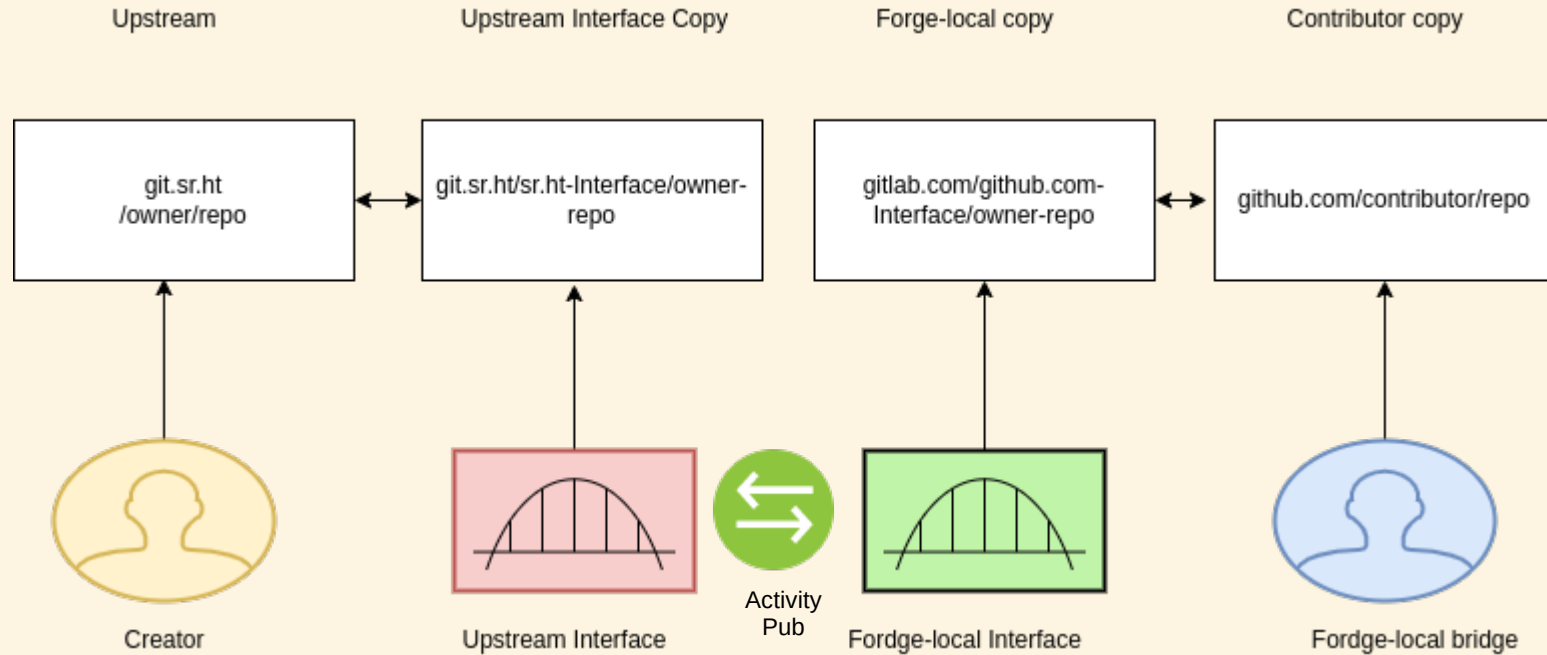
- Zero modifications to forge source code: using forge APIs
- Same workflow as contributing to native projects
- Forge developers can adapt to run as internal service(with minimal changes)

ForgeFlux Approach: Maximum Flexibility

Implement forge-specific behavior and get federation via Activity Pub for free!

```
1 class Forge:
2     def get_repository(self, owner: str, repo: str) -> RepositoryInfo:
3         """Get repository details"""
4
5     def create_repository(self, repo: str, description: str):
6         """Create new repository"""
7
8     def subscribe(self, owner: str, repo: str):
9         """subscribe to events in repository"""
10
11    def get_notifications(self, since: datetime.datetime) -> NotificationResp:
12        """subscribe to events in repository"""
13
14    def create_pull_request(self, pr: CreatePullrequest) -> str:
15        """
16        create pull request
17        return value is the URL(HTML page) of the newly created PR
18        """
19    # <---- SNIP <---->
```

ForgeFlux Approach: Federation through replication



Project Scope

- Official support for:
 - 1) Gitea
 - 2) Source Hut
 - 3) GitLab
 - 4) GitHub
- Stepping stone for native federation
- Forge Federation standardization: forking peers/ForgeFed