Gitea incremental import/export

To resume migrations and enable mirroring of issues, pull requests etc.
Mirroring more than git
Resuming migrations

For the first big stage, we would like Gitea's development could be based on a Gitea hosted and gitHub will only a mirror. This will maybe completed in v1.x. So that this issue will list all the features needed to be implemented before v1.x. And of course please discuss them and change my post.

- [ ] Squash merge (#2195) (#3148)
- [ ] Complete Protected branch (#32-#339)
- [ ] Complete API support (#64)
- [ ] API Documents (#194)
- [ ] Webhooks implementation (#2414)
- [ ] Better CI integration (#PR #1382) Drone PR (#2017)
- [ ] Comment on commit and PR (#1204) (#683-#3745)
- [ ] Approve system (#2794-#3745)
- [ ] Approve limitations (#2051)
- [ ] Migrate all throughout github repository to gitea (#4220, #7283, #6206, #7410)
- [ ] Dump/restore github/gitea repository data to a local directory and restore to gitea #12244

Migrating Progress Updated:

- [ ] migrate gitea repository -> https://gitea.com/gitea/gitea blocked by #18165
- [ ] migrate go-sdk repository -> https://gitea.com/gitea/gitea
- [ ] migrate git repository -> https://gitea.com/gitea/git
- [ ] migrate tea repository -> https://gitea.com/gitea/tea
- [ ] migrate website repository -> https://gitea.com/gitea/website
- [ ] migrate blog repository -> https://gitea.com/gitea/blog
- [ ] migrate theme repository -> https://gitea.com/gitea/theme
- [ ] migrate redirects repository -> https://gitea.com/gitea/redirects
- [ ] migrate homebrew-gitea repository -> https://gitea.com/gitea/homebrew-gitea
Federation protocols and formats
Storing the state of a project in git

Each gitea project has two git repositories

- https://gitea.com/gitea/test-env.git
- https://gitea.com/gitea/test-env.wiki

Let’s add a third git repository

- https://gitea.com/gitea/test-env.projectbase
Data structures in Gitea

- Issues
- Labels
- Pull requests
- Milestones
- ...
Build on the Gitea migration format

- **Git**: Migrate a repository only from any Git service.
- **GitHub**: Migrate data from github.com or other Github instances.
- **GitLab**: Migrate data from gitlab.com or other GitLab instances.
- **Gitea**: Migrate data from gitea.com or other Gitea instances.
- **Gogs**: Migrate data from notabug.org or other Gogs instances.
Validate, document & maintain

{\x{3C}JSON Schema{\x{3E}

{
"$schema": "https://json-schema.org/draft/2020-12/schema",
"$id": "https://example.com/product.schema.json",
"title": "Product",
"description": "A product in the catalog",
"type": "object"
}
Idempotent gitea migration

Not idempotent

New issue I1 => Create => OK
New issue I1 => Already exists => FAIL

Idempotent

New issue I1 => Create because not exists => OK
New issue I1 => Do nothing because exists => OK
Mirroring == incremental migration
Mirroring for the first time

On https://gitea.io/

- Write the database content of me/software to files
- git commit
- git push https://gitea.io/me/software.projectbase

On https://myforge.io/

- git clone https://gitea.io/me/software.projectbase
- Read migration files into the database
Updating the mirror

On https://gitea.io/

- Write the database content of me/software to files
- git commit the change
- git push https://gitea.io/me/software.projectbase

On https://myforge.io/

- git pull https://gitea.io/me/software.projectbase
- Read updated migration files into the database
References

https://gitea.io/
https://forgefriends.org/
https://lab.forgefriends.org/forgefriends/forgefriends/