Git workflow for infrastructure-puppet repo

Who this workflow is for

✅ This page describes the workflow for those infra peeps with git repo commit access.
If you do not have commit access, please Fork our repo on Github and issue a Pull Request - we will be notified and respond to PRs in a timely manner.

For Infra folks with commit bit - the current workflow to use goes something like this.

**DO NOTE: Deployment branch is currently locked, only root can push to it.**

**Working on the infrastructure-puppet repo**

```bash
git clone https://gitbox.apache.org/repos/asf/infrastructure-puppet.git
```

Since this repo is on Gitbox, you can push to Gitbox or Github, but it's best to choose one and stick to it (split brain is a hell of a thing)

Ensure you have deployment branch up-to date.
```bash
git checkout deployment
git pull
```

**DO NOT** use master. It is not used any more and changes pushed to master will be ignored.

**work on your branch**

```bash
git checkout -b $yourbranch
```

*(do some amazing coding)*

Do some lint checking:
```bash
bundle exec puppet-lint modules/ [1]
git add .
git commit [-S] -m "changes to my branch" (Optionally consider using -S to have your commit(s) verified [2])
git push origin $yourbranch # ALWAYS specify what branch you're pushing to!
```

*(ask an active infra member to approve (+1) your branch and either they will merge it or you can self-merge quoting the +1 and its author in the log message.)*

**Pull requests**

once you've made a branch, feel free to just make a pull request on github [https://github.com/apache/infrastructure-puppet/pull/new/deployment](https://github.com/apache/infrastructure-puppet/pull/new/deployment)

Github is pretty smart and will recognize branches you've made to select against

This is can be a better method for merging large changes that require discussion or are more asynchronous across timezones/ etc

**Merge your own branch in case of emergency**

*Important: This means having to merge without a +1 from anyone else - i.e. nobody has reviewed your branch and nobody is around to do so and that the branch is in need of immediate merge, i.e. some service is down and needs it. **LEAVE A NOTE IN THE COMMIT MESSAGE***

```bash
git pull
git checkout deployment
```

Do some lint checking:
bundle exec puppet-lint modules/ [1]
git merge origin/$yourbranch # will provide you an opportunity for a commit message

Merging others branches (approve + merge) (default workflow)
git pull

git checkout $theirbranch

Do some lint checking:
bundle exec puppet-lint modules/ [1]
git checkout deployment
git merge origin/$theirbranch # may provide you an opportunity for a commit message
git push origin deployment # ALWAYS specify what branch you're pushing to!

Keeping your branch in sync with deployment (a.k.a rebase)
git pull

git checkout $mybranch
git rebase deployment

(\textit{fix any merge conflicts by using git status for what needs to be done and asking those in \#asfinfra})
git push origin $mybranch # ALWAYS specify what branch you're pushing to!

Merging Conflicts

something like (whilst on your branch):
git rebase deployment

(\textit{edit and resolve conflicts, the stuff between <<<<<< HEAD and >>>>>>> $branch})
git add $conflicted_file(s)
git rebase --continue

Cleaning up after yourself (deleting your merged branch)

(delete branch locally after merge)
git branch -d $branch (it may complain, and if so, use -D)

(delete branch on remote)
git push origin :$branch

Links to external resources

Resolving merge conflicts in many more situations

More tips on cleaning up branches etc :-}
Footnotes

**Sign your commits with your GPG key**
Consider using `git commit -S -m "blah"` when committing. That is use `-S` in conjunction with your GPG key to have your commits verified.

- Add 'signingkey = YOURKEY' to your .gitconfig file (example Daniel Pono Takamori would use 'signingkey = E2BA6F3F'
- Add your GPG key to your Github Settings
- Make your commits with the -S flag

to make the setting permanant per repo run this command in your repo:

```
git config commit.gpgsign true
```

no need to remember the -S switch then.

For more info see : this GitHub article on GPG signing your commits.

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**Prepare for lint checking**
From root of puppet repo on deployment branch, run

```
gem install bundler
```

From root of puppet repo on deployment branch, run

```
bundle install
```

To check again puppet-lint, run

```
bundle exec puppet-lint modules/
```

For finer grained lint checking ignoring stuff we cant do much about currently use (and tweak as needed)

```
Lint checks with some ignore args
bundle exec puppet-lint --no-nested_classes_or_defines-check
--no-autoloader_layout-check modules/
```

```
lint for the yaml files
```

```
gem install yaml-lint
yaml-lint data/nodes/name-of.yaml
yaml-lint data/nodes (leave out filename to check them all)
```

Other tips:-

In Vim to remove all trailing whitespaces from all lines in a file:-
Recently upgraded your Mac?
Having just upgraded from Sierra to High Sierra - to be able to edit yaml again and other stuff I had to:

```
Re-install some stuff

gem install bundler
# cd to your infrastructure-puppet git checkout
bundle install
xcode-select --install
# optional:
gem install ruby_gpg
```

ruby_gpg is possibly optional, try without it first if you like.

Now, your should have a back to fully working setup. (If not, add here what else you had to do!)