How we hack on Cockpit Infrastructure

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Goal

treat infrastructure as code

self-validating PR \rightarrow container rebuilds, private temp deployment, tests against product main branches

land $\text{PR} \rightarrow \text{redeploy}$ to production

Updating unit test container

.github/workflows/unit-tests.yml:

```
name: unit-tests
on: pull_request
Γ...1
  - name: Build unit test container if it changed
    run:
      changes=$(git diff origin/master..HEAD --
                containers/unit-tests/)
      [ -z "$changes" ] || podman build \
        --tag ghcr.io/cockpit-project/unit-tests \
        containers/unit-tests/
  - name: Run unit-tests container
    run:
      podman run -v $(pwd):/source:ro \
         ghcr.io/cockpit-project/unit-tests
```

Keeping unit-tests container up to date

workflows/unit-tests-refresh.yml

```
on:
  schedule:
    # auto-refresh every Sunday evening
    - cron: '0 22 * * 0'
Γ...1
  - name: Build fresh containers
    run:
      podman build --tag ghcr.io/cockpit-project/unit-tests \
         containers/unit-tests/
  - name: Run amd64 clang test
    run: containers/unit-tests/start CC=clang
  - name: Push containers to registry
    run: podman push ghcr.io/cockpit-project/unit-tests
```

Developing GitHub workflows

Test on your fork:

example: cockpit-ostree npm-update

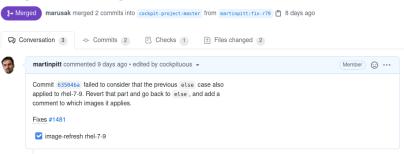
example: homepage docs auto-update

Interactive SSH for debugging:

uses: mxschmitt/action-tmate@v3

Self-validating bots

images: Fix building of rhel-7-9 #1507



Run PR against a bots PR



Self-maintaining bots











Updates to deployed infrastructure





Simple revert on quay.io tag history:

	Show Future	Filter History
TAG CHANGE	DATE/TIME	REVERT
i		
latest was reverted to SHA256 9bfccb27b89a from	Tue, Jan 12, 2021 10:08 AM	Restore to SHA256 4e7bfb29f463
i an 5, 2021 iii Jan 5, 2021 ii Jan 5, 2021		
latest was moved to SHA256 4e7bfb29f463 from	Tue, Jan 5, 2021 8:55 AM	Revert to SHA256 9bfccb27b89a
latest was reverted to SHA256 9bfccb27b89afrom	Tue, Jan 5, 2021 8:54 AM	Restore to SHA256 4e7bfb29f463
latest was reverted to SHA256 4e7bfb29f463from	Tue, Jan 5, 2021 8:53 AM	Restore to SHA256 9bfccb27b89a
latest was moved to SHA256 9bfccb27b89a from	Tue, Jan 5, 2021 8:21 AM	Revert to SHA256 4e7bfb29f463
2021-01-05 was created pointing to SHA256 615461782a2b	Tue, Jan 5, 2021 8:21 AM	

Links/Documentation

- source.redhat.com/groups/public/cockpit/ cockpit_wiki/cockpit_ci_resources
- github.com/cockpit-project/cockpituous/
- secrets in internal CEE GitLab repo, only accessible to a few team members
- github.com/cockpit-project/bots
- #cockpit on Freenode, cockpit-devel@lists.fedorahosted.org