

Yet Another Web hooks yaw-hooks



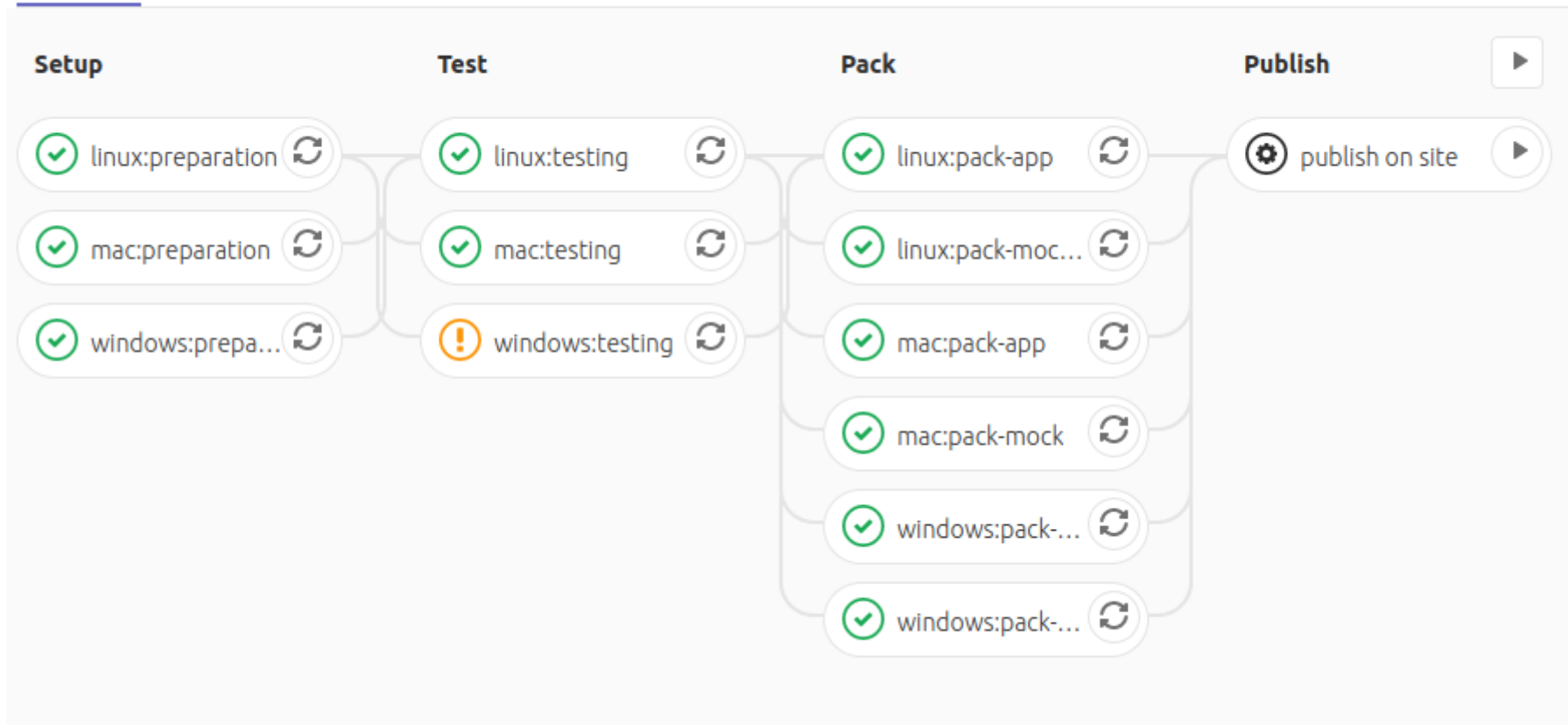
KWLUG August 2020 talk

Why?

- Simple setup
- Strict credentials, one per webhook
- Allow shell script/program for hook function
- Allow TypeScript/JavaScript code for hook function to run in node process

Webhook use case (gitlab)

Pipeline Jobs 13 Failed Jobs 1



Webhook use: actual script

upload-app-files.sh X

ci > upload-app-files.sh

```
1  #!/bin/sh
2
3  upload() {
4      file=$1
5      echo "Uploading $file"
6      curl --silent --cacert "$SERVER_CERT" --header "X-Access-Token:
7      $UPLOAD_TOKEN" -X POST --header "Content-Type: application/octet-stream"
8      --data-binary "@$file" https://$SERVER/upload-app?file=$file
9
10     echo
11 }
12
13 files="$(ls | grep ^3NWeb)"
14
15 if [ -z "$files" ]
16 then
17     echo "No 3NWeb app packs to upload"
18     exit 0
19 fi
20
21 for file in $files
```

Simple setup (SaltStack example)

```
EXPLORER  ...  webhooks.sls X
> OPEN EDITORS
✓ SALT-PRODUCTION
  ✓ pillar
    > creg
    > s-0-1
    > s-0-111
    ✓ s-1-1
      ≡ haproxy.sls
      ≡ net.sls
      ≡ webhooks.sls M
      ≡ zfs.sls
    > s-1-2
    > s-2-1
    > s-2-2
    > salt
    > swarm
    ≡ net.sls
    ≡ top.sls
  ✓ salt
    > certbot
    > docker
    > docker-registry
    > hosts
    > lxc

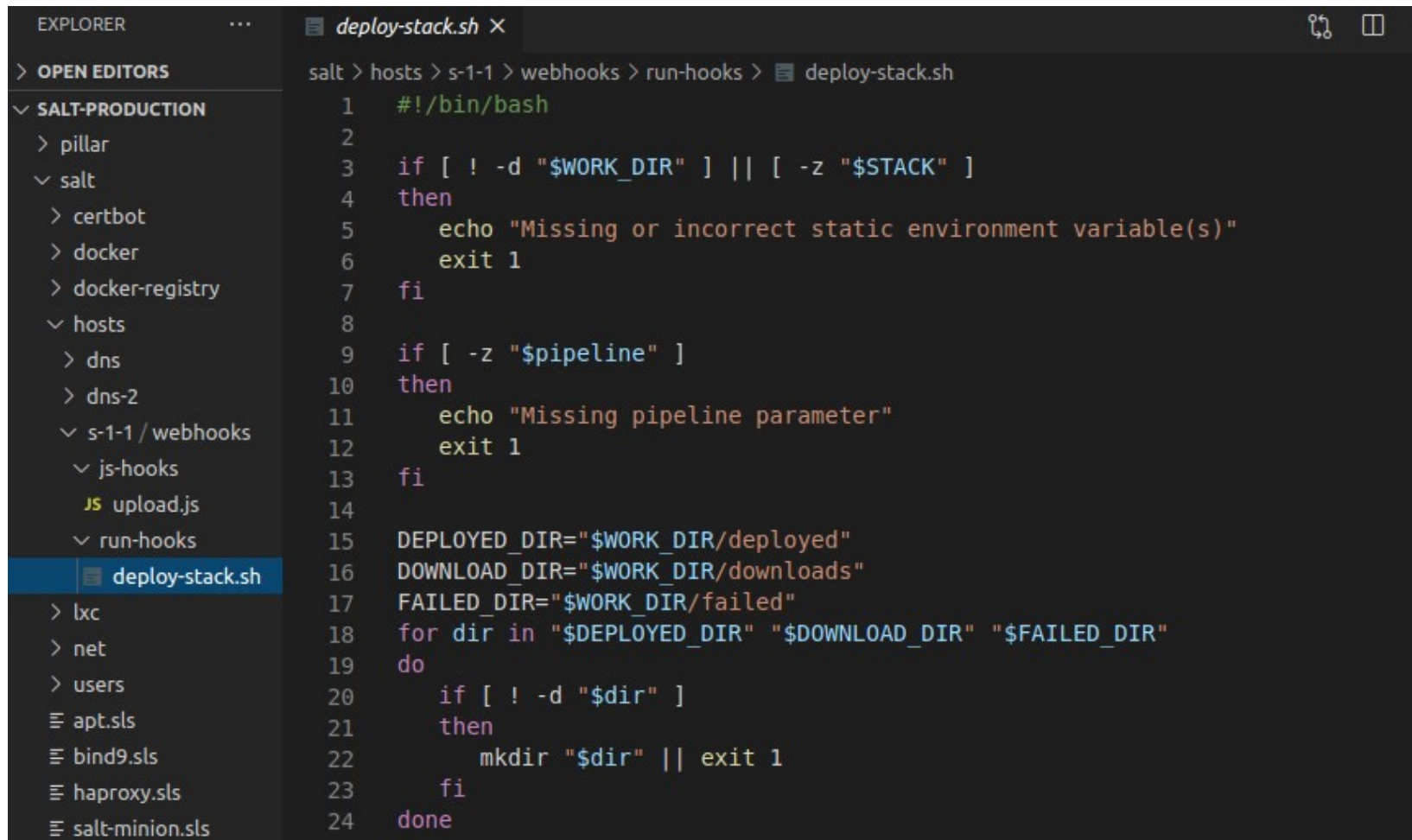
pillar > s-1-1 > webhooks.sls
1  webhooks:
2
3  conf: |
4    port: 7999
5    address: 172.16.1.1
6
7  tls:
8    key: /etc/webhooks/tls/key.pem
9    cert: /etc/webhooks/tls/cert.pem
10
11  scriptsRoot: /opt/webhooks/js-hooks
12  runRoot: /opt/webhooks/run-hooks
13
14  hooks:
15
16    - request:
17      url: upload-app
18      type: POST
19      body: binary
20      bodyMaxSize: 100mb
21      accessToken:
22        type: sha256
23        value: ???
24
25    script:
26      file: upload.js
      func: saveFile
```

Main consideration: credentials

- Separate credentials for every webhook
(no need for adding users, like ssh needs)

```
$ node build/gen-access-token.js
{
  secret: 'zWr6_J3Hlp5ZP2uiFRuc0un6FT2wZHFAhEjPh_u5pO0=',
  tokenCfg: {
    type: 'sha256',
    value: 'Kle6VPBr27IT2oRQQAlX3K57Lr2NbvB-VLI8ZNqBnhI='
  }
}
```

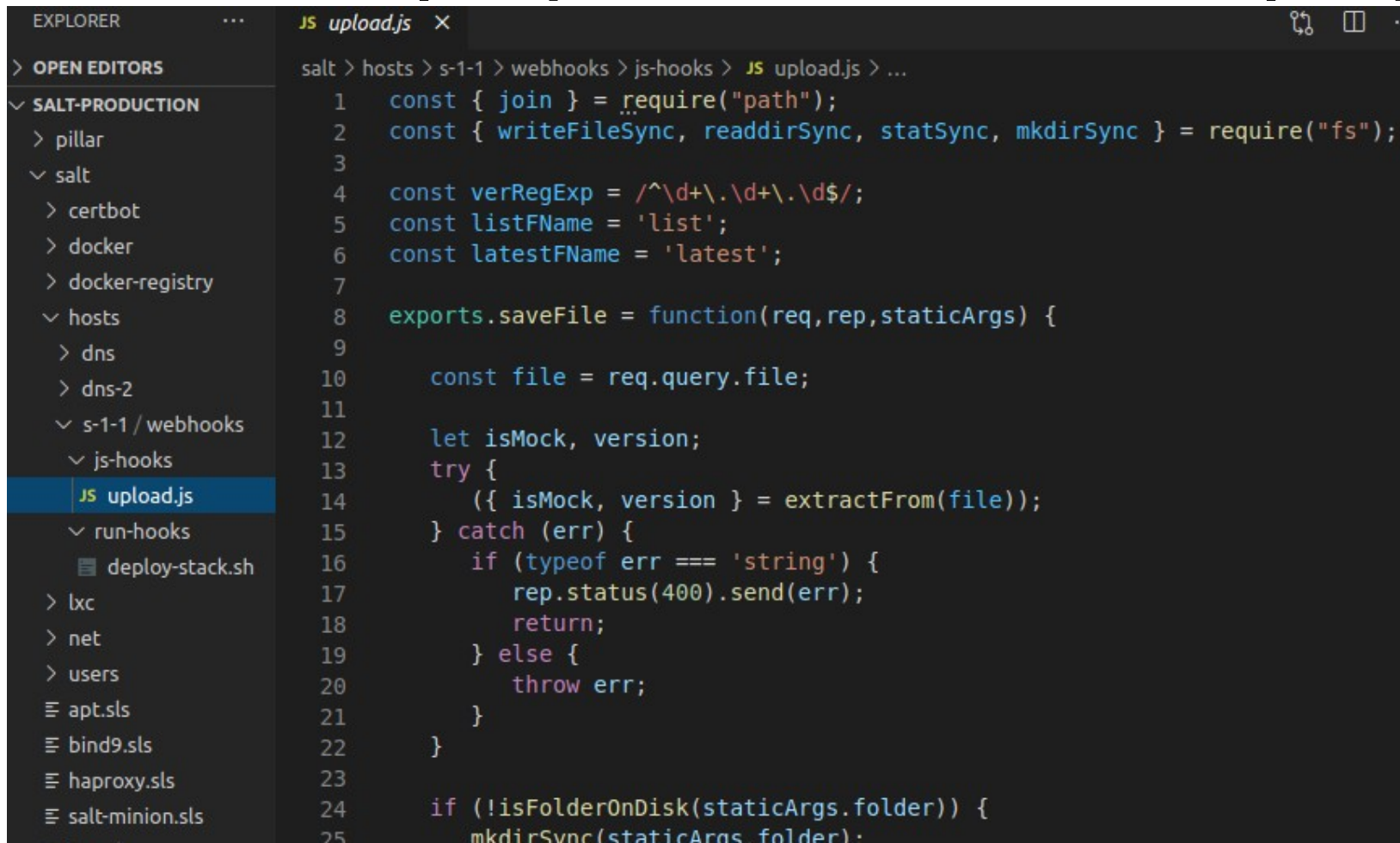
Shell script (SaltStack example)



```
EXPLORER    ...    deploy-stack.sh X
> OPEN EDITORS
SALT-PRODUCTION
  > pillar
  > salt
    > certbot
    > docker
    > docker-registry
  > hosts
    > dns
    > dns-2
  > s-1-1 / webhooks
    > js-hooks
      JS upload.js
    > run-hooks
      deploy-stack.sh
  > lxc
  > net
  > users
  ≡ apt.sls
  ≡ bind9.sls
  ≡ haproxy.sls
  ≡ salt-minion.sls

salt > hosts > s-1-1 > webhooks > run-hooks > deploy-stack.sh
1  #!/bin/bash
2
3  if [ ! -d "$WORK_DIR" ] || [ -z "$STACK" ]
4  then
5      echo "Missing or incorrect static environment variable(s)"
6      exit 1
7  fi
8
9  if [ -z "$pipeline" ]
10 then
11     echo "Missing pipeline parameter"
12     exit 1
13 fi
14
15 DEPLOYED_DIR="$WORK_DIR/deployed"
16 DOWNLOAD_DIR="$WORK_DIR/downloads"
17 FAILED_DIR="$WORK_DIR/failed"
18 for dir in "$DEPLOYED_DIR" "$DOWNLOAD_DIR" "$FAILED_DIR"
19 do
20     if [ ! -d "$dir" ]
21     then
22         mkdir "$dir" || exit 1
23     fi
24 done
```

JavaScript (SaltStack example)



```
EXPLORER  JS upload.js  X
> OPEN EDITORS
SALT-PRODUCTION
  > pillar
  > salt
    > certbot
    > docker
    > docker-registry
  > hosts
    > dns
    > dns-2
  > s-1-1 / webhooks
    > js-hooks
      JS upload.js
    > run-hooks
      deploy-stack.sh
  > lxc
  > net
  > users
  apt.sls
  bind9.sls
  haproxy.sls
  salt-minion.sls

salt > hosts > s-1-1 > webhooks > js-hooks > JS upload.js > ...
1  const { join } = require("path");
2  const { writeFileSync, readdirSync, statSync, mkdirSync } = require("fs");
3
4  const verRegExp = /^\\d+\\.\\d+\\.\\d$/;
5  const listFName = 'list';
6  const latestFName = 'latest';
7
8  exports.saveFile = function(req,rep,staticArgs) {
9
10     const file = req.query.file;
11
12     let isMock, version;
13     try {
14         ({ isMock, version } = extractFrom(file));
15     } catch (err) {
16         if (typeof err === 'string') {
17             rep.status(400).send(err);
18             return;
19         } else {
20             throw err;
21         }
22     }
23
24     if (!isFolderOnDisk(staticArgs.folder)) {
25         mkdirSync(staticArgs.folder);
```


Repo

- <https://github.com/3nsoft/yaw-hooks>