

Expecto patronum!

can a gopher save you from ./dementor.sh ?

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- hosting.de

About this

Disclaimer

- Ich bin "IT-Klempner"
- "Beware of the dragons"



Me. Bewaring of dragons.

Die Patientenakte

- Frontend in .js
- Backend in C++/QT
- Dazwischen eine json API
- Ganz unten "Sedimente"

Why not .sh?

Pop quiz

Was macht eigentlich...

- `${#data[*]}` vs `${data[@]}` vs `${func}`
- `(${versions//:/ })`
- `$((...))`

Evidence A

the famous emoji loop..

```
1. array=(${versions//:/ })
2. for i in "${!array[@]}"; do
3.     # show options
4.     echo -e "\t$((i+1))\t${array[i]}" >&2
5. done
```

- Code Sieht *immer* komisch aus
- Wir haben noch *nicht* über json gesprochen

Verdict



Ron Weaseley: Doesn't like what I did there.

Evidence B

"smart" code..

```
1.  newFile=$(mktemp)
2.  func=$(openssl -rand base64 6)
3.  echo "#!/bin/bash" > $newFile
4.  echo "function \"$(echo $func)\" () {" >> $newFile
5.  echo "    /usr/bin/rsync \"$backupCommand >> $newFile
6.  echo '        return $?' >> $newFile
7.  echo "}" >> $newFile
8.  . $newFile
9.
10. logMsg="Starting: "$func
11. echo $logMsg >> $logFile
12.
13. ${func}
14. rc=$?
```

Don't try this at home

Verdict

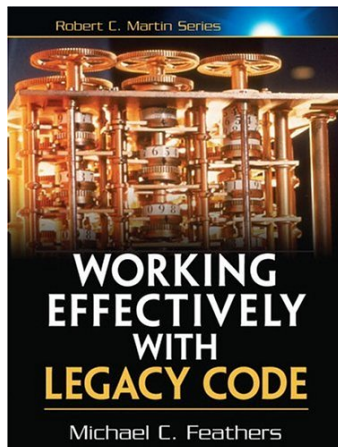


Dumbledore: Really not impressed.

ja, aber legacy code...



Tweet (<https://twitter.com/intent/tweet?text=Top%20mentioned%20books%20on%20stackoverflow.com>)



#1 Working Effectively with Legacy Code

(<https://amazon.de/dp/0131177052/?tag=devbookscom0a-21>)

Michael C. Feathers

The average book on Agile software development describes a fairyland of greenfield projects, with wall-to-wall tests that run after every few edits, and clean & simple

Ok, what about .py?

Python...

- Distributionen interpretieren "python" als python2 oder python3 (warum auch nicht?)
- Das gleiche gilt für "pip"
- Insgesamt schadet das der ...Vorhersehbarkeit...
- Packaging (macht *nie* Spaß..)

Außerdem...



Snake collaborates with You-Know-Who

Einige Beispiele in go

Redirection Service

Those are not the URLs you're looking for

Überblick

- Domain only kaufen & Weiterleitung schalten
- API generiert config files
- Nginx im "Sedimentbereich"

Technik

- Warten auf inotify Event
- Config validierung (nginx -t) & nginx reload
- ... endlich eine Ausrede für inotify :)

How to inotify

```
88 func watch(dir string) {
89     watcher, _ := fsnotify.NewWatcher()
90     defer watcher.Close()
91     done := make(chan interface{})
92     go func() {
93         for {
94             select {
95             case event := <-watcher.Event:
96                 if event.IsCreate() {
97                     log.Println(label.Info + " New file: " + event.Name)
98                     process(event.Name)
99                 }
100             case err := <-watcher.Error:
101                 log.Println(err)
102             }
103         }
104     }()
105
106     watcher.Watch(dir)
107     log.Println(label.Info + " Startup done. Waiting for events")
108     <-done
109 }
```

Run

Demo

SSH "jails"

... und die Gefangenen von hosting.de

- SSH Client kommt an Webserver an
- Server startet Jail (oder benutzt vorhandenes)
- Client appariert in Jail (wir schubsen)
- Kunde macht Dinge

```
curl -sSk https://example.com/secure-installer.sh | bash
```

- Kunde loggt sich aus

Problem: Zu viele container

Lösung: Weniger container

Jail janitor



Not a picture of *Cpt. Obvious*

Cleaning up...

```
38 // Scan the dbus for running processes by pre- and suffix
39 func (s *SystemdUnit) Scan() error {
40     defer s.setState()
41     s.LastScan = time.Now()
42     c, err := dbus.New()
43     if err != nil {
44         // we cannot get a dbus connection
45         s.Errors = append(s.Errors, err)
46         return err
47     }
48     defer c.Close()
49     units, err := c.ListUnitsFiltered([]string{"active", "loaded"})
50     if err != nil {
51         s.Errors = append(s.Errors, err)
52         return err
53     }
54     for _, u := range units {
55         if strings.HasPrefix(u.Name, s.Prefix) && strings.HasSuffix(u.Name, s.Suffix) {
56             s.Units = append(s.Units, u)
57         }
58     }
59     return nil
60 }
```

Honorable mentions

DHCP Server (externes Projekt)

- JSON REST API
- PXE -> Live Image (rescue oder install)

OS Installer

- JSON REST API
- Live Image holt Config und Daten aus API ab
- Prozess logging / Status report
- Neue VM in 30 Sek.

Managed Server Installer

- Ansible as an API
- Neuer Webserver in ~15 Minuten
- Inklusive Monitoring & Backup

Upcoming

- Mailfilter?
- SSH-Key Management?
- ...

Questions?



Thank you

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