



resin.io

push-to-deploy to milljuunen Raspberry Pi

Pi and More 9

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Problemstellung



Einführung

- Problem
- Lösungen?!
- Neue Probleme?!

Resin.io

Abschluss



Problemstellung

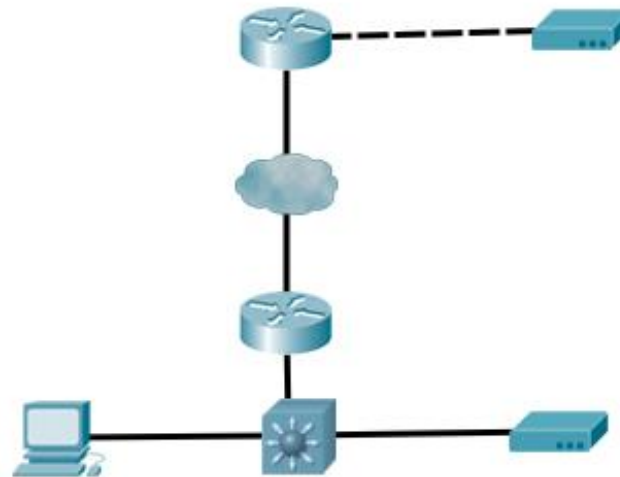


Einführung

- Problem
- Lösungen?!
- Neue Probleme?!

Resin.io

Abschluss



Problemstellung

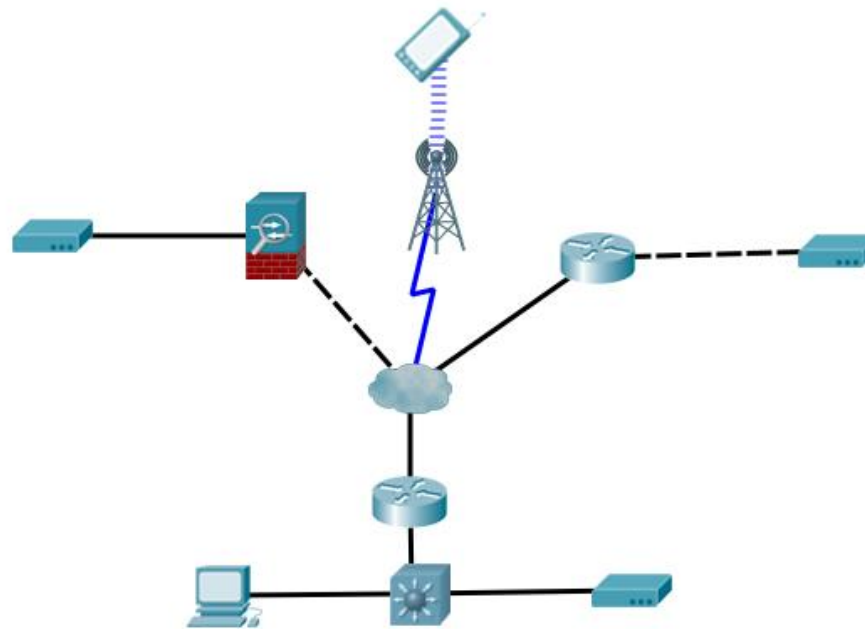


Einführung

- Problem
- Lösungen?!
- Neue Probleme?!

Resin.io

Abschluss



Mögliche Lösungen?!



Einführung

- Problem
- Lösungen?!
- Neue Probleme?!

- ftp
- reverse ssh
- cronjob Download von binärem Blob
- cronjob Download von github

Resin.io

Abschluss

Neue Probleme?!



Einführung

- Problem
- Lösungen?!
- **Neue Probleme?**

Resin.io

Abschluss

- Router/Firewall verbietet Zugriff auf Geräte
- Verbindungsabbrüche
- Übertragungsfehler
- Updatescript wird beim "Self-Update" beschädigt oder enthält Fehler
- App enthält Fehler und legt das Gerät lahm



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Modern development and deployment workflow for the Internet of Things

Update Your Linux Device Fleet Over The Air



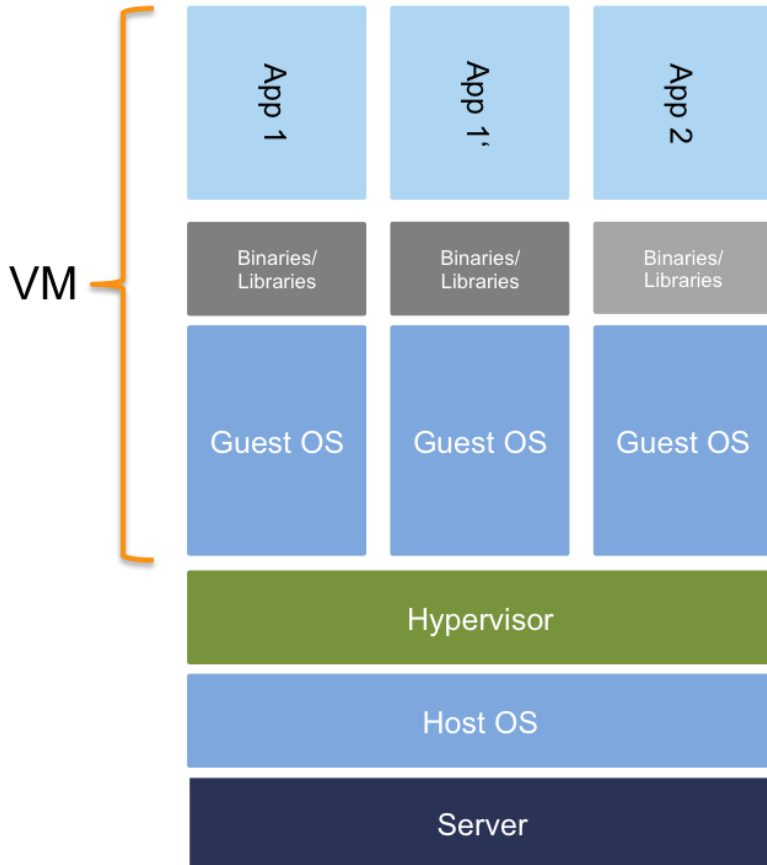
RESIN.IO IN 2 MINUTES

[DEPLOY YOUR FIRST APPLICATION](#)

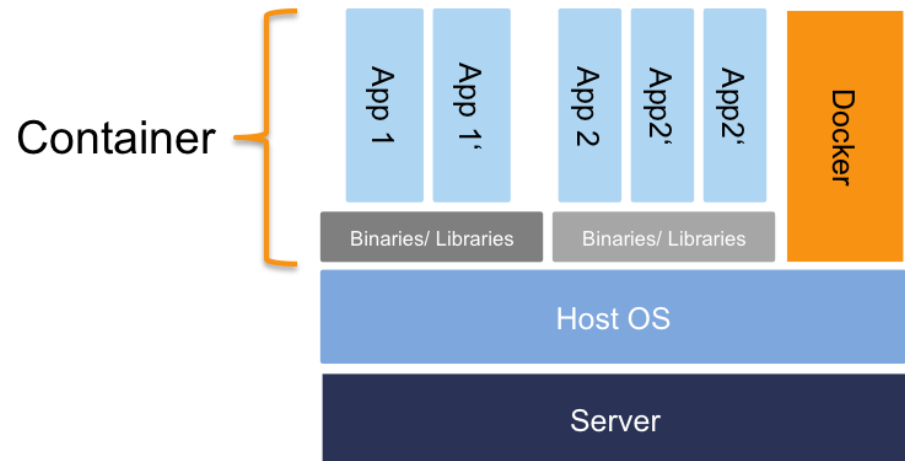
Docker: VMs vs Container



Virtualisierung: Virtuelle Maschinen vs. Docker-Container

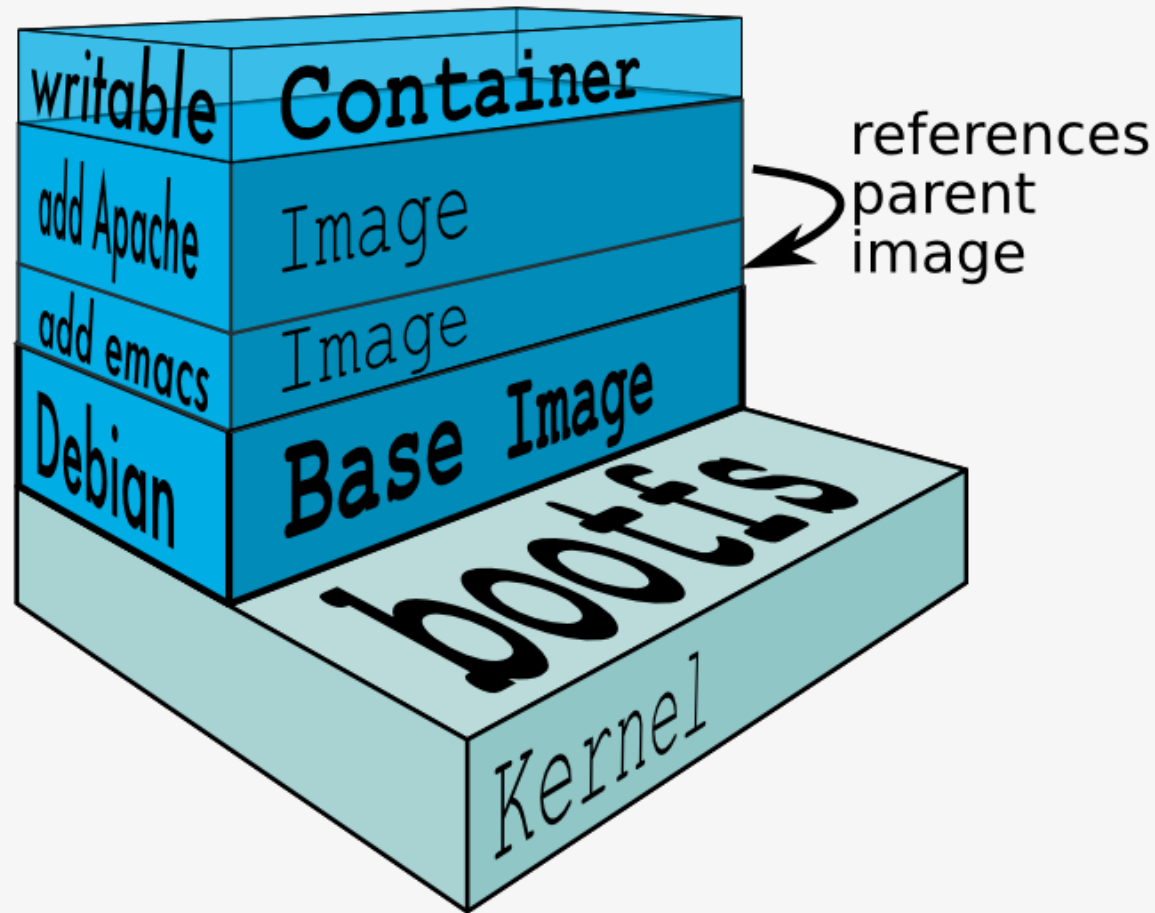


Type 2 Hypervisor



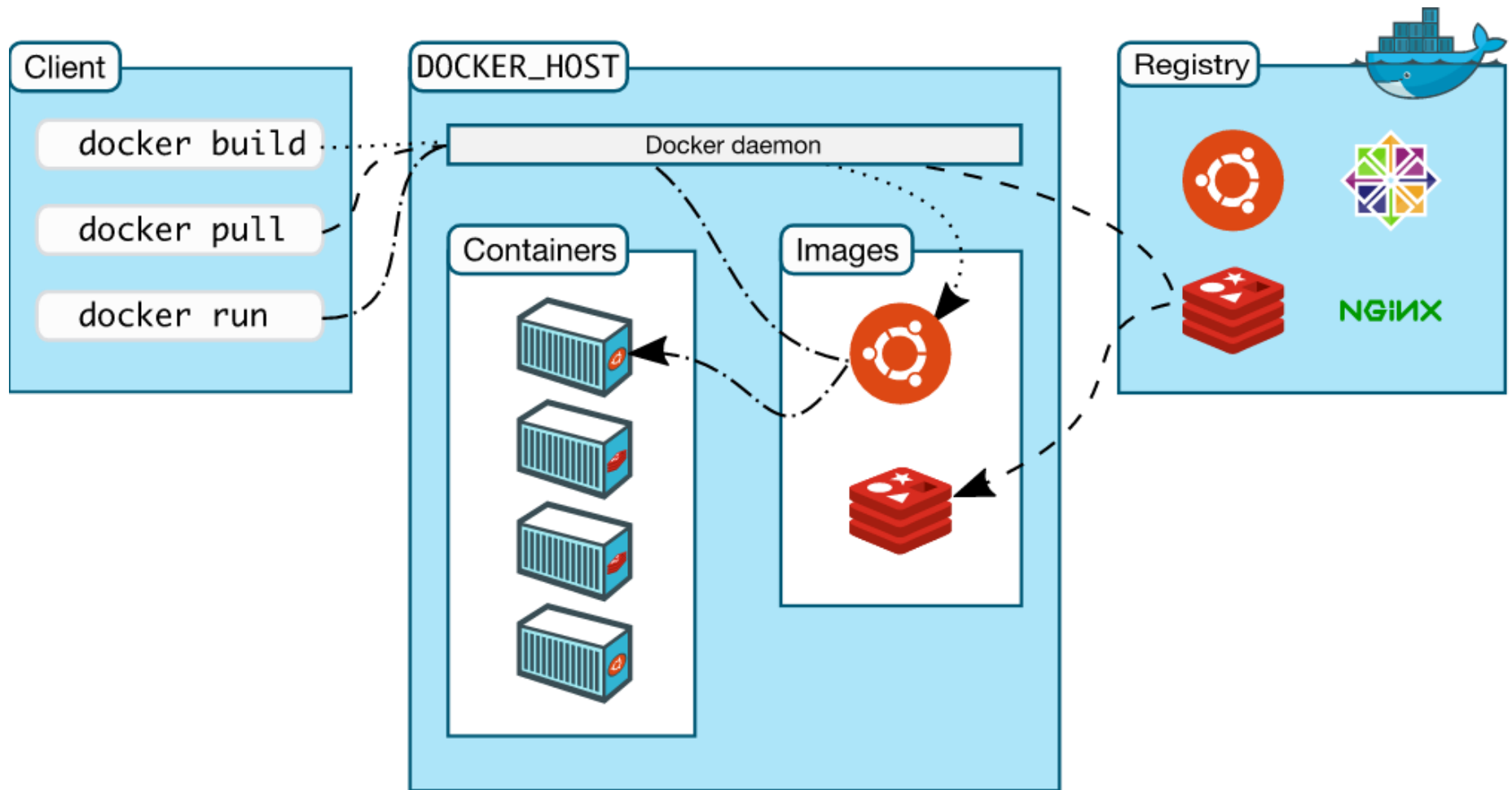
Kernel/namespaces
Virtualisierung

Docker: Container / Images / Layers



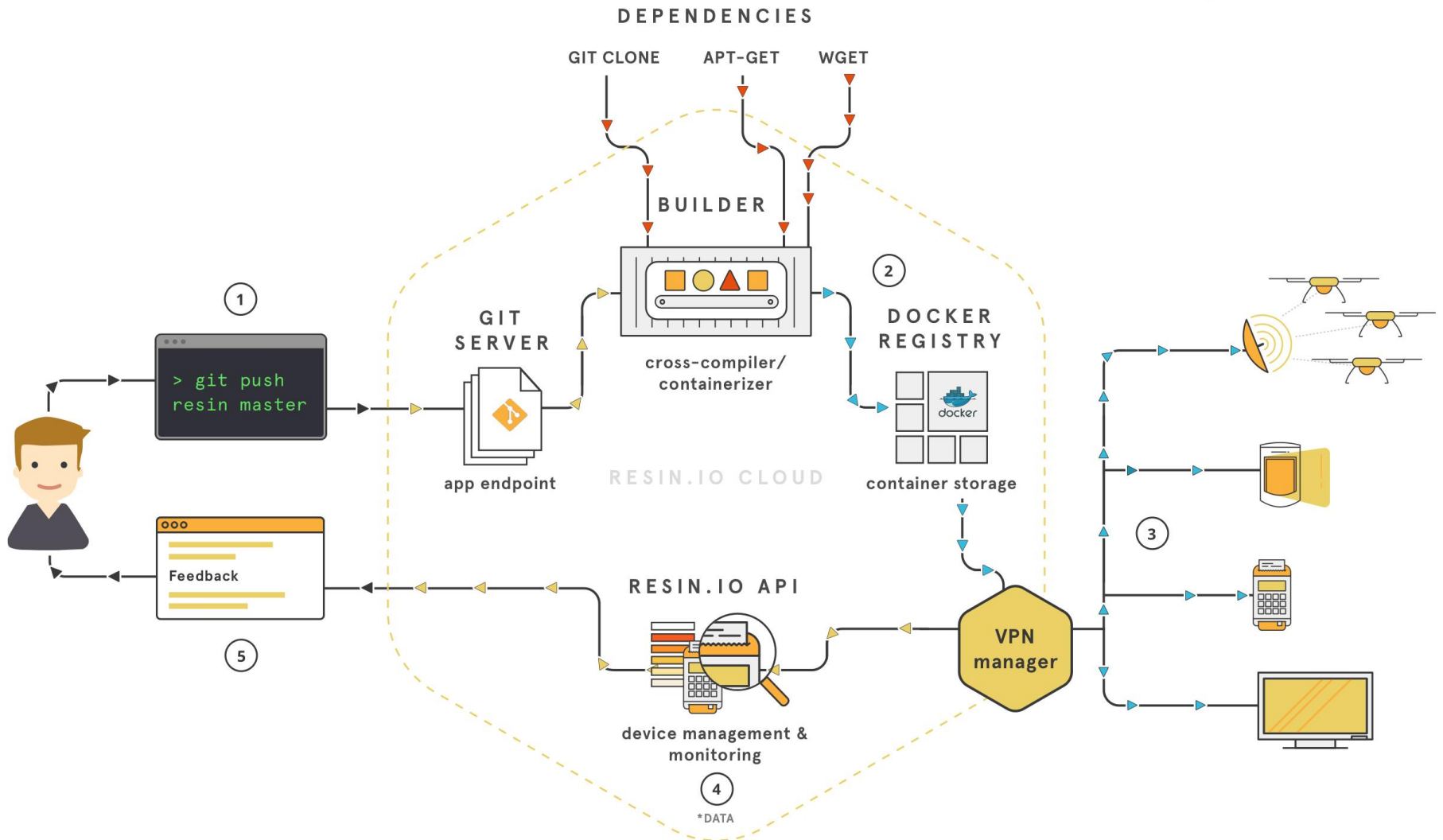
<http://stackoverflow.com/questions/24702233/docker-container-and-memory-consumption>

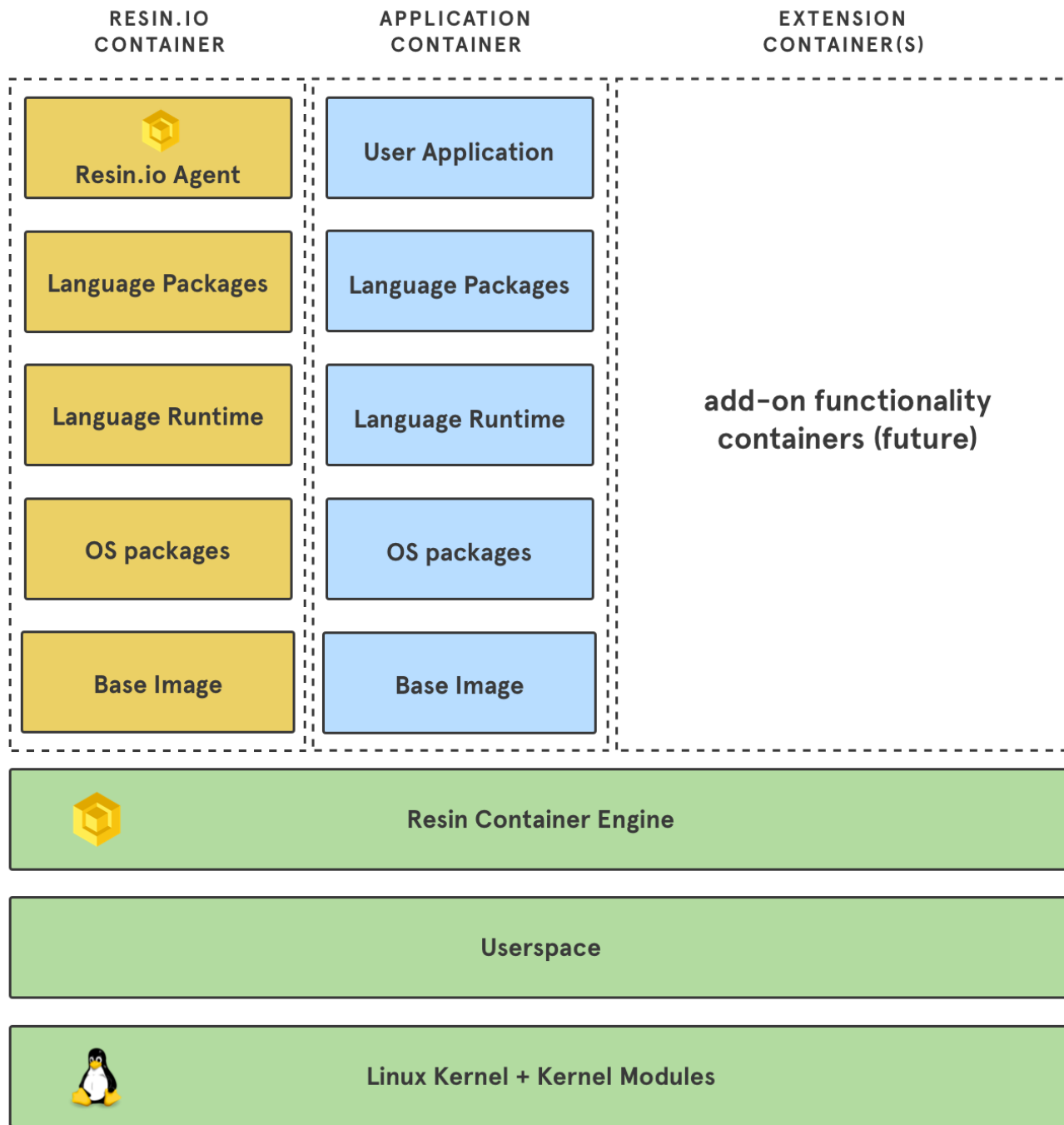
Docker: Architektur



[Docker]

Resin.io Architektur







- Grundlagen
- Docker
- **Resin.io**
- Live Demo

SSH Key eingeben oder von Github importieren

Enter your SSH Key

Need help?

We need your public SSH key to authenticate you when you push changes to your application's git repo. Don't know what this is? Check out GitHub's instructions.

Main key



Import from GitHub

Skip

Save Key

How To



Einführung

Resin.io

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Abschluss

Account auf resin.io erstellen, einloggen, App erstellen

APPLICATION NAME

The application name should be at least 4 characters long. It can only contain letters and numbers.

DEVICE TYPE

 Raspberry Pi (v1 or Zero) ▼

CREATE NEW APPLICATION

How To



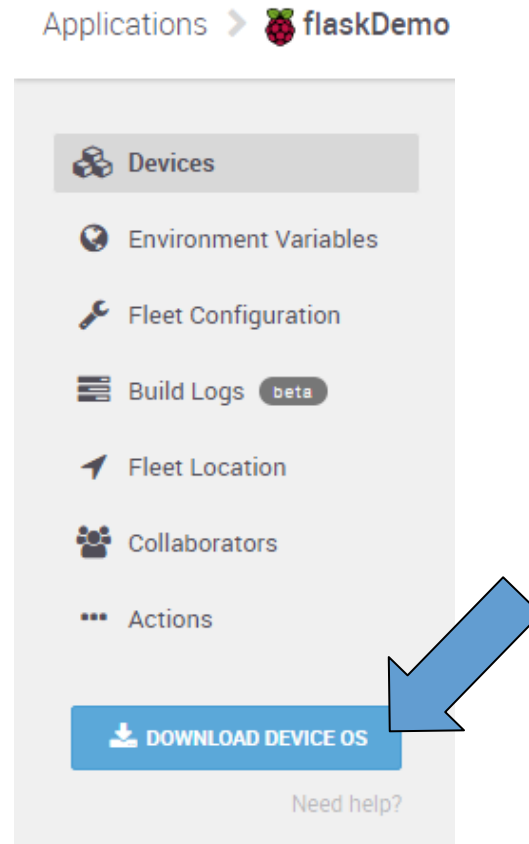
Einführung

Resin.io

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Abschluss

Image für das Gerät herunterladen



How To



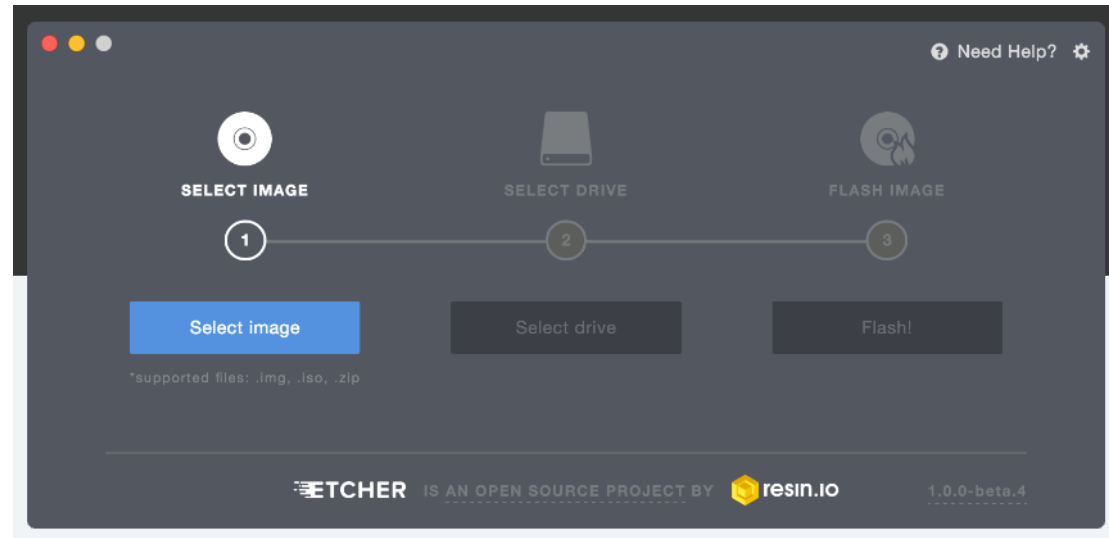
Einführung

Resin.io

- Grundlagen
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- Live Demo

Abschluss

Image auf SD Karte schreiben, z.B. mit SDFormatter und Win32DiskImager oder etcher.io



How To



Einführung

Resin.io

- Grundlagen
- Docker
- Resin.io
- Live Demo

Abschluss

Applications > flaskDemo ?

git remote add resin

Search devices... Application commit: 02ee

Status	Name	Last Seen	IP Address
Online	blue-pond	Currently online (for an hour)	192.168.

DOWNLOAD DEVICE OS

Need help?

TOTAL DEVICES
1

How To



Einführung

Resin.io

- Grundlagen
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- Resin.io
- Live Demo

Abschluss

Beispiel Repo klonen:
`git clone https://github.com/nmaas87/resin-openwrt-flask-app.git`

Ins Verzeichnis wechseln:
`cd resin-openwrt-flask-app`

Repo der App als master zum Beispiel adden
`git remote add resin XXX`



Repo auschecken
`git push resin master`

How To

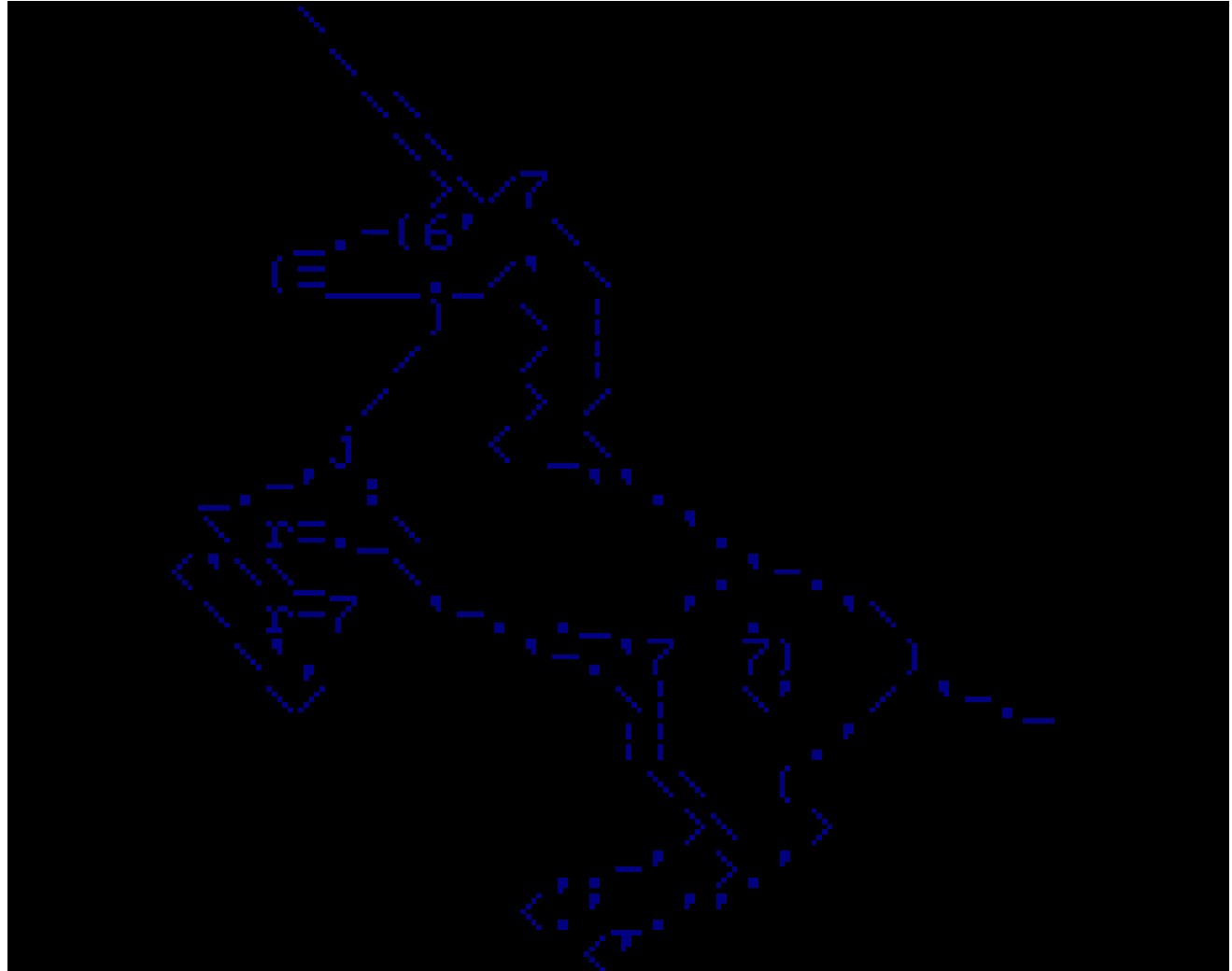


Einführung

Resin.io

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Abschluss



How To



Summary

STATUS

 **Online**

CAME ONLINE

3 hours ago

COMMIT

c5a9093 

HOST OS VERSION

Resin OS 1.1.4

UUID

e2fd857 

IP ADDRESS

192.168. 

AGENT VERSION

1.8.0

Notes

Add device notes...

Logs

Clear Expand 

```
08.06.16 17:19:50 [+0200] Starting application
'registry.resin.io/flaskdemo/02ee01dda2710feabaec5bce0a4b92534711ad2a'
08.06.16 17:19:53 [+0200] Started application
'registry.resin.io/flaskdemo/02ee01dda2710feabaec5bce0a4b92534711ad2a'
08.06.16 17:20:09 [+0200] * Running on http://0.0.0.0:80/ (Press CTRL+C to quit)
08.06.16 20:44:09 [+0200] Downloading application
'registry.resin.io/flaskdemo/c5a9093c017d4e5a739f0985c9e4c80eec9ddb65'
08.06.16 20:44:46 [+0200] Downloaded application
'registry.resin.io/flaskdemo/c5a9093c017d4e5a739f0985c9e4c80eec9ddb65'
08.06.16 20:44:46 [+0200] Killing application
'registry.resin.io/flaskdemo/02ee01dda2710feabaec5bce0a4b92534711ad2a'
08.06.16 20:44:56 [+0200]
08.06.16 20:44:57 [+0200] Killed application
'registry.resin.io/flaskdemo/02ee01dda2710feabaec5bce0a4b92534711ad2a'
08.06.16 20:44:57 [+0200] Installing application
'registry.resin.io/flaskdemo/c5a9093c017d4e5a739f0985c9e4c80eec9ddb65'
08.06.16 20:44:59 [+0200] Installed application
'registry.resin.io/flaskdemo/c5a9093c017d4e5a739f0985c9e4c80eec9ddb65'
08.06.16 20:44:59 [+0200] Starting application
'registry.resin.io/flaskdemo/c5a9093c017d4e5a739f0985c9e4c80eec9ddb65'
08.06.16 20:45:01 [+0200] Started application
'registry.resin.io/flaskdemo/c5a9093c017d4e5a739f0985c9e4c80eec9ddb65'
08.06.16 20:45:20 [+0200] * Running on http://0.0.0.0:80/ (Press CTRL+C to quit)
```



How To



Einführung

Resin.io

- Grundlagen
- Docker
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- Live Demo

Abschluss

Unter Actions „Enable Public Device URL“ aktivieren

The screenshot shows the Resin.io web interface. On the left is a navigation sidebar with a back arrow at the top, followed by menu items: Device Summary, Environment Variables, Device Configuration, Terminal, Location, and Actions (which is highlighted). Below the menu is a 'DOWNLOAD DEVICE OS' button and a 'Need help?' link. The main content area is titled 'Actions' and contains three items:

- Public URL** (VIEW DOCS): Expose your device to the web with secure HTTP forwarding. A blue button labeled 'ENABLE PUBLIC DEVICE URL' is on the right, with a blue arrow pointing to it.
- Update Locking** (VIEW DOCS): Enable lock override if your app locked updates but hanged in an invalid state. A yellow button labeled 'ENABLE LOCK OVERRIDE' is on the right.
- Restart Application** (VIEW DOCS): This will restart the application container on the device. A yellow button labeled 'RESTART APPLICATION' is on the right.

An orange help icon (a question mark in a circle) is located in the bottom right corner of the main content area.

How To



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URL aufrufen:

Public URL [VIEW DOCS](#)

DISABLE PUBLIC DEVICE URL

Expose your device to the web with secure HTTP forwarding.

Port 80 on this device is now accessible from the URL:

https://



How To



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Abschluss

Browser:

```
Hello World
```

Fragen?



Vielen Dank für Ihre Aufmerksamkeit!

Quellenangaben



- Bilder, soweit nicht anders angegeben, von resin.io