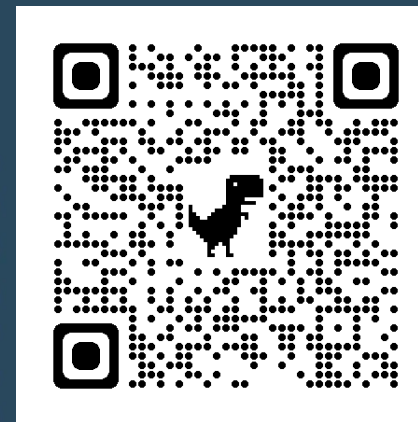




**STARTUP SCRIPT FOR AN EPICS EDGE SERVER FOR  
SMALL LABORATORY EXPERIMENTS**

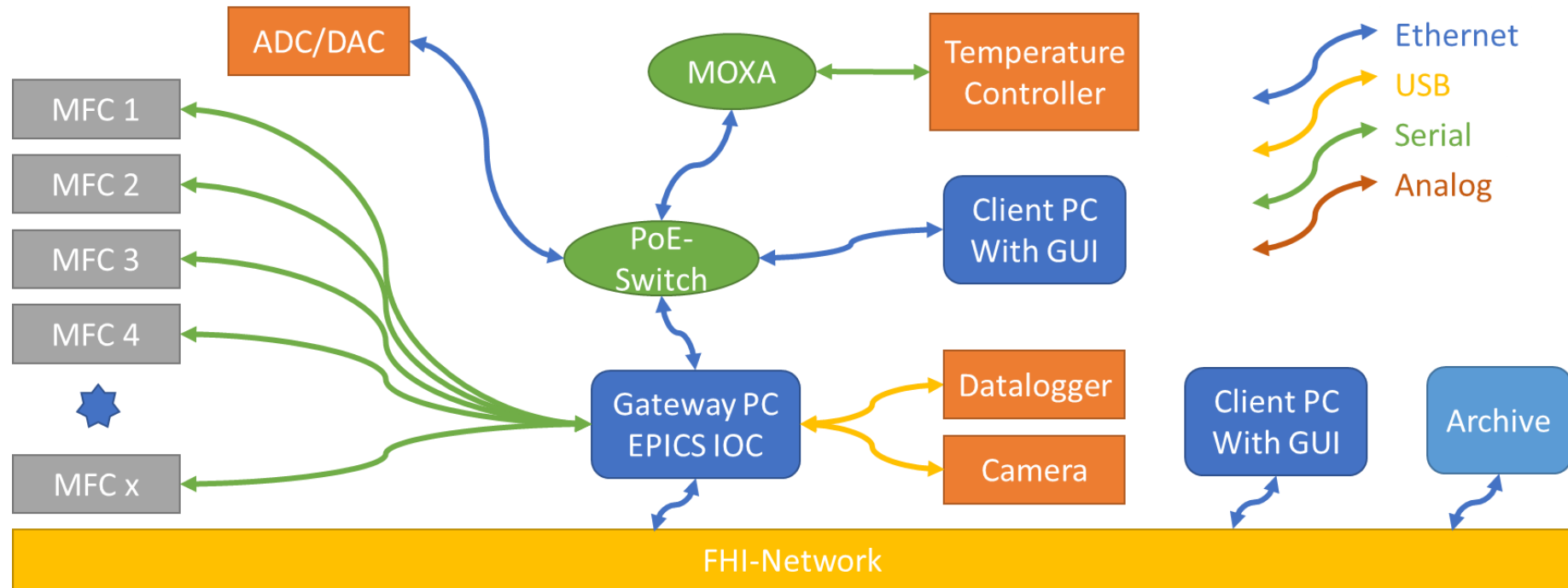


**Patrick Oppermann and Heinz Junkes**

# Goal

- Fast installation of EPICS servers
- As many systems as possible on the same level
- Standard interface and layout
- Not bound to previous knowledge of the user
- Minimum hardware requirements
- Not bound to software systems, operating system version, security patches

# Small Laboratory Experiments



Gateway PC with up to 10 COMs  
400€



PoE Switch  
200€/ 16 Port



Ethernet ADC/DAC  
300€/ 8 channels 16 Bit



Moxa NPort 5650-8-DTL  
800€ / 8 channels

# Key features

- Create user 'epics'?
- Installing necessary software (Packages)?
- Install basic dnsmasq config for DHCP and DNS?
- Install procServ to /opt ?
- Install EPICS base?
- Install FHI support modules compilation?
- Create FHI folder for user epics? (RELEASE.local)

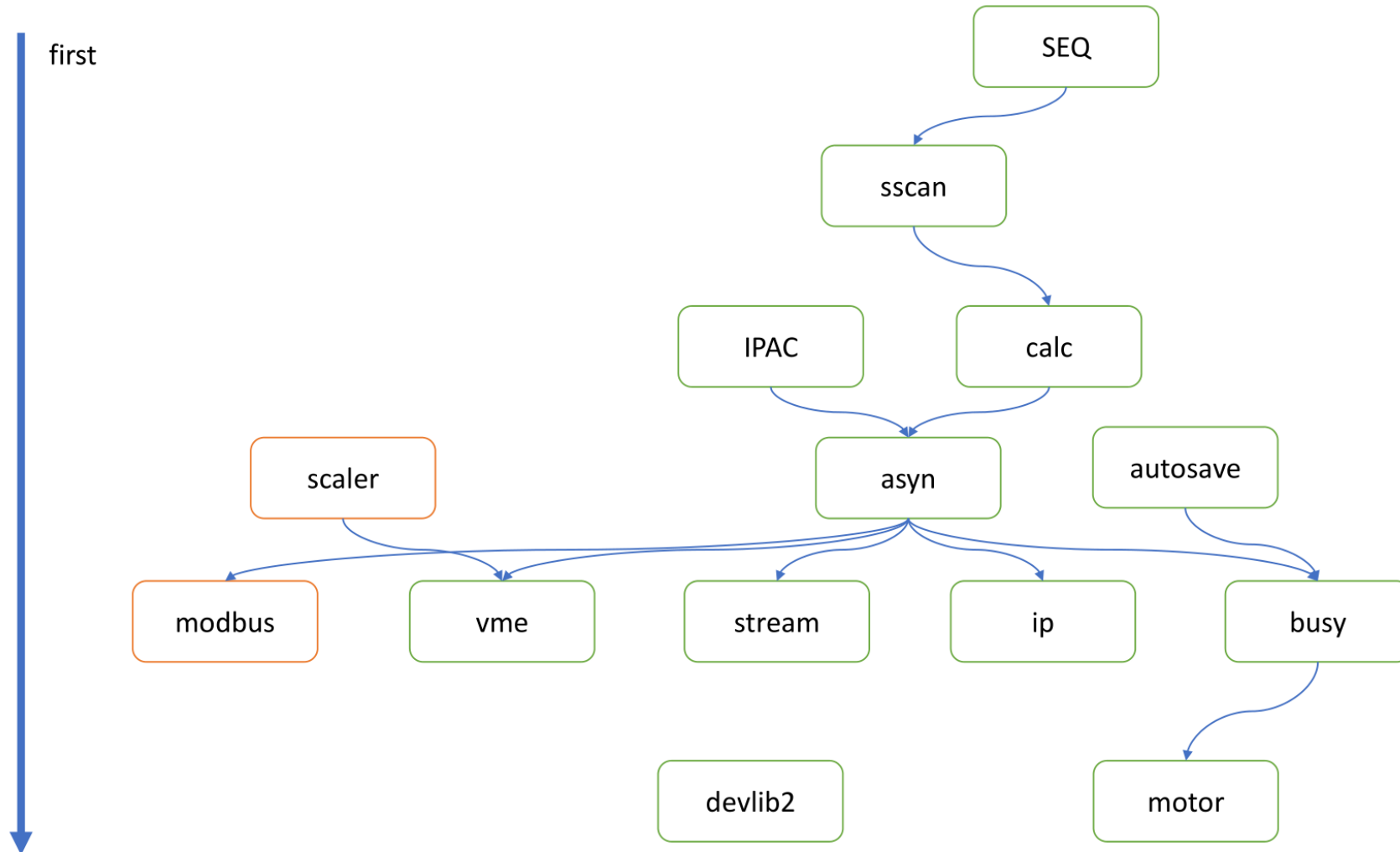


debian

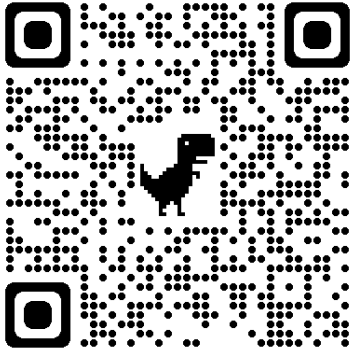


python™

# Support Module Structure



# <https://gitlab.fhi.mpg.de/epics-tools/epics-edge-setup>



The screenshot shows the GitLab interface for the repository `epics-tools / epics-edge-setup`. The page includes a sidebar with navigation options like Project overview, Details, Activity, Releases, Repository, Issues, Merge Requests, Wiki, Members, and Settings. The main content area displays the repository name, project ID (182), and statistics (29 Commits, 1 Branch, 0 Tags, 236 KB Files, 236 KB Storage). A commit history table is visible below.

Name	Last commit	Last update
99-serial.rules	modify udev rules to fit jetway 10 port comp...	1 month ago
Readme.md	debian non-free in Readme	1 month ago
ca-gateway	add README and ca-gateway service file	5 months ago
debian-setup.py	argh	5 months ago
gateway.access	add fixed IP to /etc/hosts && add gateway fi...	5 months ago
gateway.conf	add fixed IP to /etc/hosts && add gateway fi...	5 months ago
gateway.env	add fixed IP to /etc/hosts && add gateway fi...	5 months ago
gateway.pvlist	add fixed IP to /etc/hosts && add gateway fi...	5 months ago
get-serial-hwports.sh	modify udev rules to fit jetway 10 port comp...	1 month ago
ports.txt	modify udev rules to fit jetway 10 port comp...	1 month ago
test-serial.py	Update snippet	1 year ago

# Folder tree

```

./FHI/IOC
./EPICS/base-7.0
./EPICS/epics-support
./EPICS/epics-support/motor
./EPICS/epics-support/modbus
./EPICS/epics-support/scaler
./EPICS/epics-support/seq-2.2.8
./EPICS/epics-support/autosave
./EPICS/epics-support/patches
./EPICS/epics-support/vme
./EPICS/epics-support/calc
./EPICS/epics-support/StreamDevice
./EPICS/epics-support/ipac
./EPICS/epics-support/asyn
./EPICS/epics-support/ip
./EPICS/epics-support/devlib2
./EPICS/epics-support/ca-gateway
./EPICS/epics-support/busy
./EPICS/epics-support/sscan
./EPICS/epics-support/recsync

```

## RELEASE.local

```

# EPICS_BASE 3.14.6 or later is required
EPICS_BASE=/home/epics/EPICS/epics-base
# can not use ${HOME} due to auto generation on
# some submodules
SUPPORT=/home/epics/EPICS/epics-support
# IPAC is only necessary if support for Greensprings IP488 is required
# IPAC release V2-7 or later is required.
IPAC=${SUPPORT}/ipac
# If CALC was built with SSCAN support then SSCAN must be defined for testEpicsApp
SSCAN=${SUPPORT}/sscan
# SEQ is required for testIPServer
SNCSEQ=${SUPPORT}/seq-2.2.8
## For sCalcout support in asynOctet - applications include asynCalc.dbd
CALC=${SUPPORT}/calc
AUTOSAVE=${SUPPORT}/autosave
BUSY=${SUPPORT}/busy
IP=${SUPPORT}/ip
ASYN=${SUPPORT}/asyn
MOTOR=${SUPPORT}/motor
MODBUS=${SUPPORT}/modbus
DEVLIB=${SUPPORT}/devlib2
STREAM=${SUPPORT}/StreamDevice
# actively empty the PCRE variable since it otherwise tries to include the epics module PCRE instead of the system one
PCRE=
PCRE_LIB=/usr/lib/x86_64-linux-gnu/
PCRE_INCLUDE=/usr/include/
RECCASTER=${SUPPORT}/recsync/client

```