

Features

- Installs Debian GNU/Linux, Ubuntu, Linux Mint SuSe, Rocky Linux, AlmaLinux,
- **Class concept** supports heterogeneous configuration and hardware
- Fast creation of disk images for VM and the cloud
- It's easy to create a **customized Live ISO**
- FAI-CD performs the installation without network connection
- Autodiscover of the install server
- Reproducible installation
- Automatic documentation in central repository
- Advanced **disaster recovery** system
- Automated hardware inventory
- **Full remote control** via ssh during installation process
- *Shell, Perl, Python* and *expect* script support for customization
- The FAI monitor shows an overview of the installation progress

hostname	confdir	declass	partition	extrabase	repository	instsoft	configure	tests	savehog	faicd	reboot
demohost	✓	✓	✓	✓	✓	✗	✗	!	✓	✓	→
atom03	✓	!	✓	✓	✓	!	✓	✗	✓	✓	→
atom02	✓	✓	✓	✓	✓	→					
atom01	✓	✓	✓	✓	✓	✓	✓	✗	→		
gnomehost	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	→

- openQRM has a FAI plugin for cloud deployments
- Qlustar is a HPC Linux OS, using FAI as installer
- **Start using the web service**
<https://fai-project.org/FAIme>

Availability

- Homepage: <http://fai-project.org>
- Open source under GPL-2+ license
- Detailed user guide, mailing lists, IRC channel
- Official Debian packages, ISO images of FAI CD
- Commercial support available

Some FAI users

- Anonymous, financial industry, 32.000 hosts
- LVM insurance, 10.000 hosts
- StayFriends, 700+ hosts
- City of Munich, 16.000 hosts
- XING AG, 300-400 hosts
- Albert Einstein Institute, 3000+ hosts
- Zivit, 260 hosts on two IBM z10 EC mainframes
- Archive.org, 1200 hosts + 800 KVM hosts
- Opera Software, ~300 hosts
- Stanford University, 450 hosts
- MIT Computer science research lab, 200 hosts
- The Welcome Trust Sanger Institute, 540 hosts
- Deutsches Elektronen-Synchrotron, 273 hosts
- Mobile.de, ~600 hosts
- Electricité de France (EDF), 1500 hosts
- Ocado Technology, many thousands
- ETH Zurich, systems group, ~300 hosts
- Dropbox, 300 hosts
- Umeå university, 70 hosts
- High Performance Computing Center North, HPC2N, two clusters with a total of 310 hosts
- For more see <http://fai-project.org/reports/>

FAI

Fully Automatic Installation



debian ubuntu



Plan your installation,
and FAI installs your plan.

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What is FAI?

- System for unattended Linux installation
- Installs and configures the whole OS and all additional software
- Centralized configuration management and administration
- Scalable and flexible rollout method for Linux migration
- **Linux deployment in only a few minutes**

Why use FAI?

- Manual installation takes hours, FAI just minutes
- Recurring tasks are boring and lead to errors
- You need an infrastructure management
- You want to save time

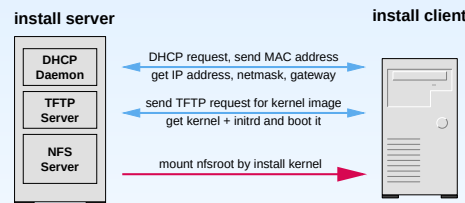
Installation times

CPU + RAM	software	time
E5-2690v2, 3.0 GHz, SSD	5.4 GB	7 min
i7-3770T, 2.50 GHz, SSD	6.0 GB	9 min
Core i7, 3.2 GHz	4.3 GB	7 min
Core i7, 3.2 GHz	471 MB	77 sec
Disk Image, no Xorg	1.1 GB	1:30 min
Disk Image, Xfce	3.7 GB	4:09 min
Disk Image, GNOME	4.4 GB	5:04 min
Live ISO, no desktop	1.3 GB	2:30 min
Live ISO, Xfce	3.8 GB	5:40 min
Live ISO, GNOME	4.6 GB	6:45 min

The three steps of FAI

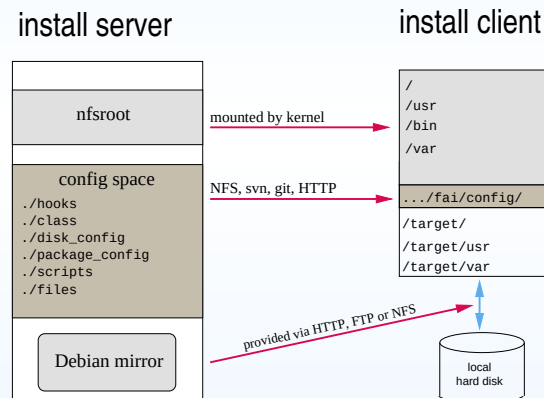
1 - Boot host

- Boot via network card (PXE), CD-ROM or USB drive



- Now a complete Linux OS is running without using the local hard disks

2 - Get configuration data



3 - Run installation

- partition local hard disks and create filesystems
- install software using package manager (apt, yum, yast and more)
- configure installed OS and additional software
- save log files to install server
- reboot new system

Requirements

DHCP, TFTP, NFS server: Install client receives network and configuration data from this servers.

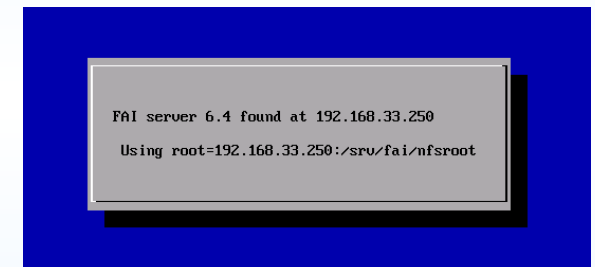
Client nfsroot: A directory which contains the whole file system for an install client during installation. All clients share the same nfsroot.

Configuration space: A directory tree which contains the configuration data. These are just small text files in a certain directory structure.

Debian mirror: Access to a package repository via HTTP, FTP and NFS is supported as well as a proxy.

These services may be spread across several computers.

Screenshots



Autodiscover the FAI server



Selecting a FAI profile from the menu