

Fully Automatic Installation

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

Features

- Installs Debian, Ubuntu, Rocky, SuSe,
- **Class concept** supports heterogeneous configuration and hardware
- Advanced disaster recovery system
- **Autodiscover** of the install server
- Creates disk images for KVM, XEN, VirtualBox, VMware or cloud VMs
- Reproducible installation
- Automatic documentation in central repository
- Automated hardware inventory
- Full remote control via ssh during installation process
- FAI runs on i386, AMD64, PowerPC, ARM and IBM z10 mainframe
- Several GUI for FAI using GOSa, openQRM, DC²
- **FAI.me build service**

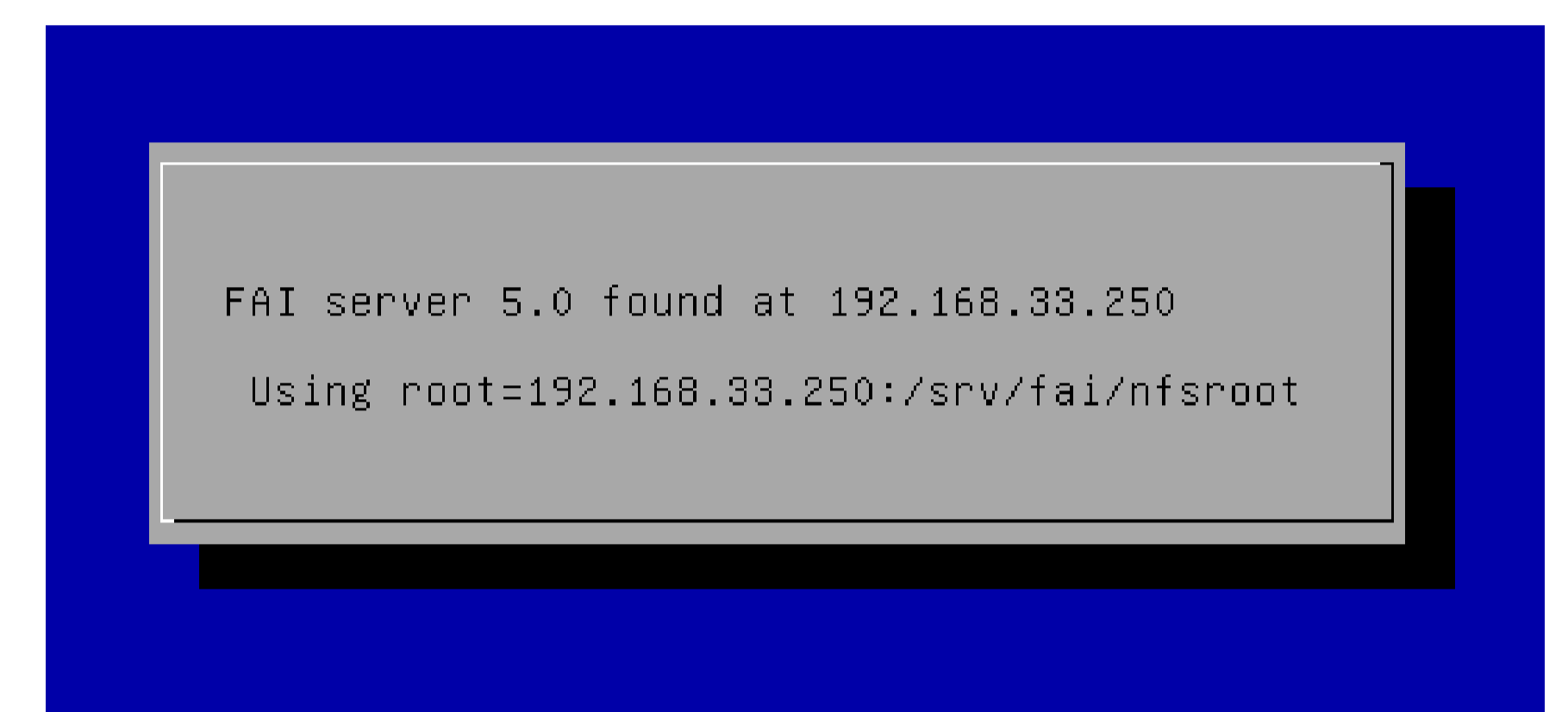
Availability

- Homepage: <https://fai-project.org>
- Open source under GPL license
- Detailed documentation, mailing lists, IRC channel
- Official Debian packages, ISO images of demo CD
- Commercial support available

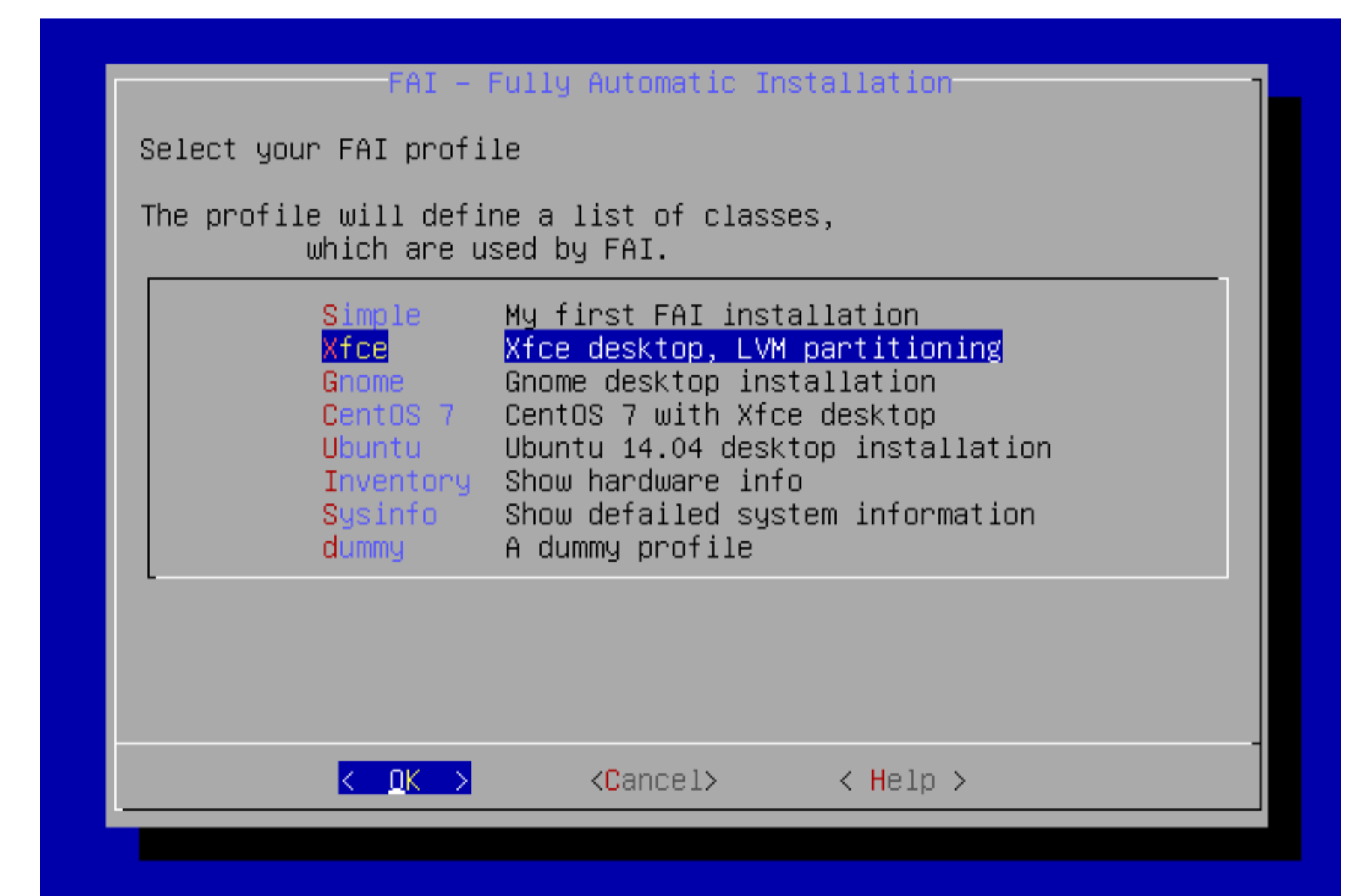
FAI at work



The FAI monitor daemon



Autodiscover of the FAI server

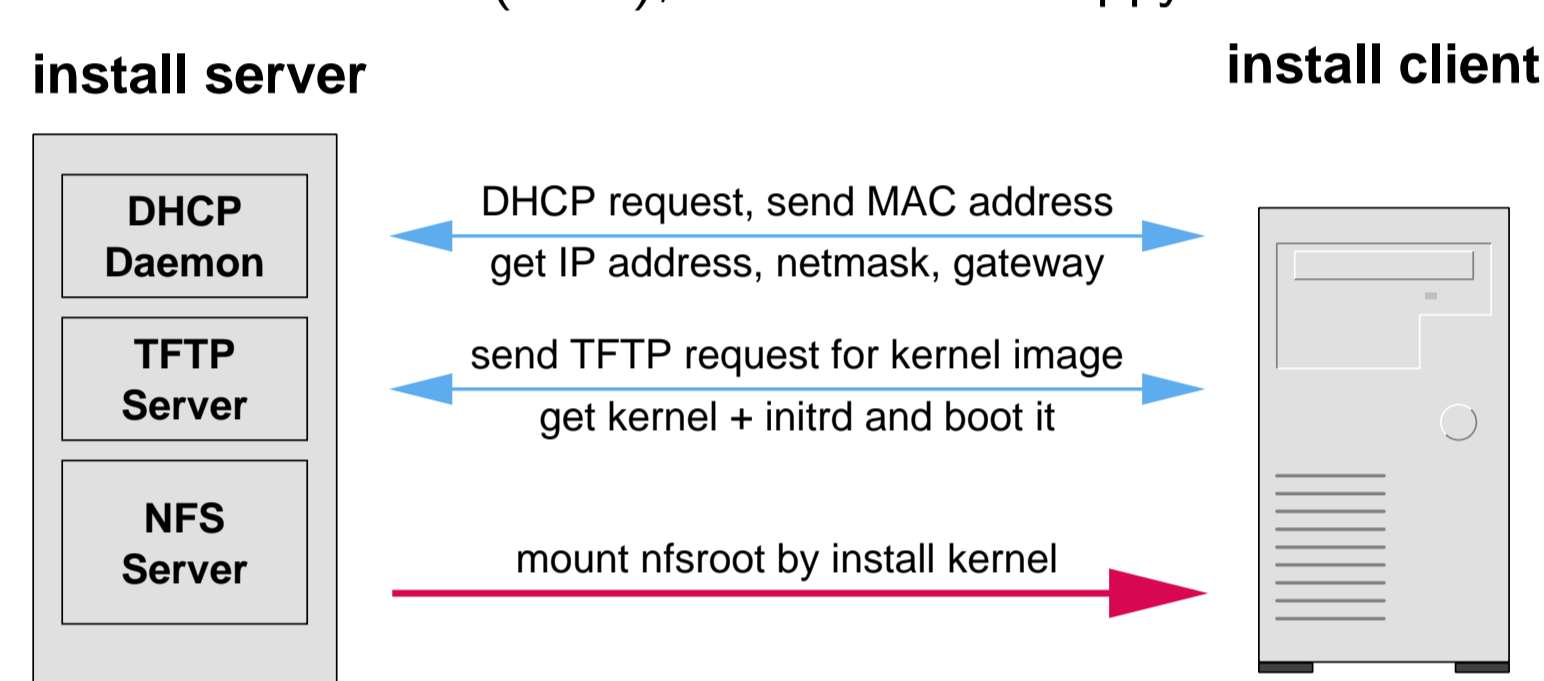


Selecting a FAI profile from the menu

The three steps of FAI

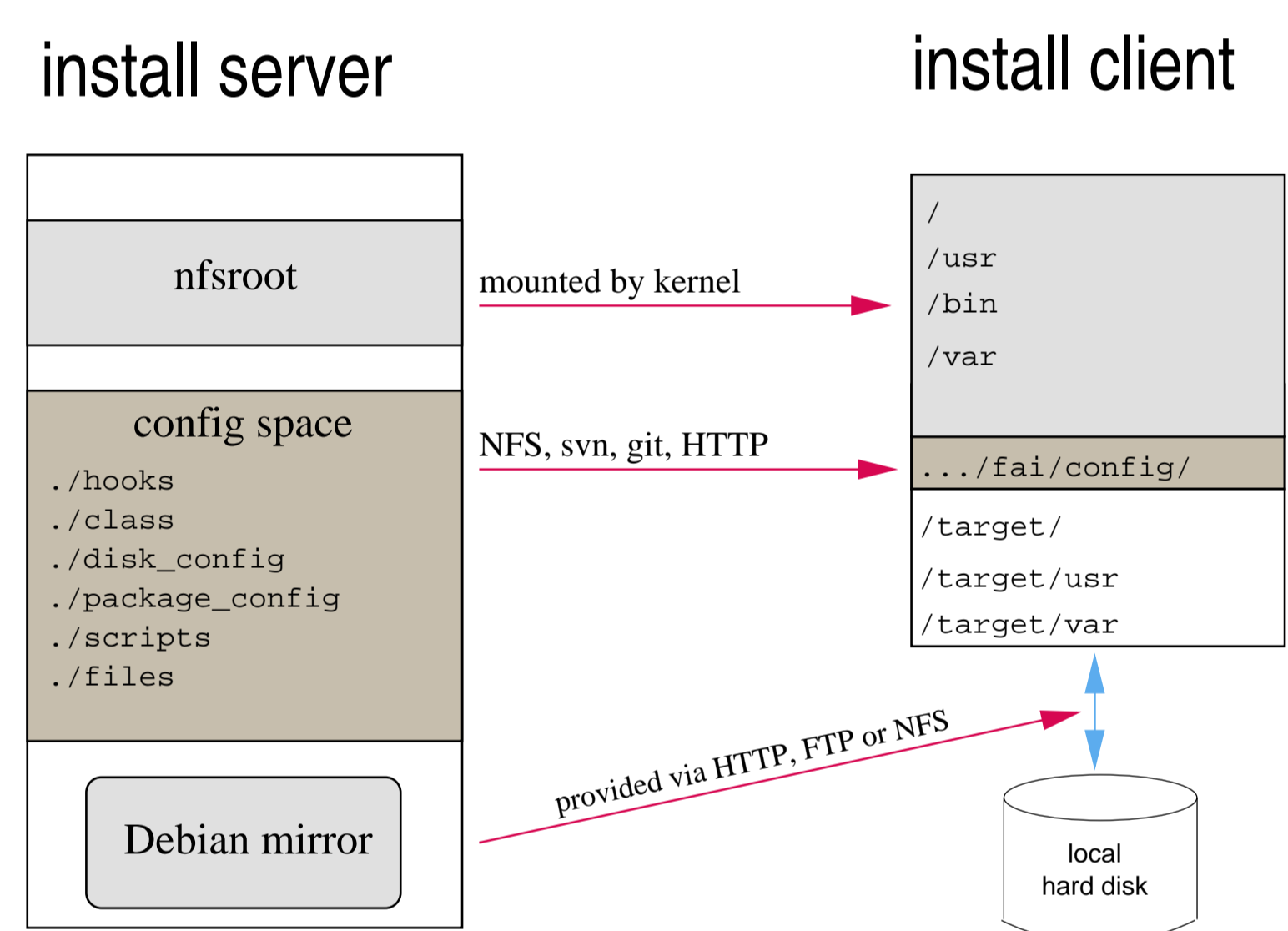
1 - Boot host

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



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

2 - Get configuration data



3 - Run installation

- partition local hard disks and create filesystems
- install software using apt-get command
- configure OS and additional software
- save log files to install server, then reboot new system

FAI

Plan your installation,
and FAI installs your plan.



FAI users

- Anonymous, financial industry, 32.000 hosts
- LVM insurance, 10.000 hosts
- City of Munich, 16.000
- StayFriends, 700+ hosts
- Albert Einstein Institute, 3000+ hosts
- Zivit, 260 hosts on two IBM z10 EC mainframes
- Archive.org, 1200 bare metal and 800 KVM hosts
- XING AG, 300-400 hosts
- Opera Software, ~300 hosts
- Stanford University, 450 hosts
- MIT Computer science research lab, 200 hosts
- The Welcome Trust Sanger Institute, 540 hosts
- Mobile.de, ~600 hosts
- Thomas Krenn AG, 500 per month
- Electricité de France (EDF), 1500 hosts
- ETH Zurich, systems group, ~300 hosts
- Trinity Centre for High Performance Computing, 356 opteron, 80 xeon
- For more see <https://fai-project.org/reports/>

Examples of installation times

CPU + RAM	software	time
E5-2690v2, 3.0 GHz, SSD	5.4 GB	7 min
Core i7, 3.2 GHz, 6GB	4.3 GB	7 min
Core i7, 3.2 GHz, 6GB	471 MB	77 s
Core2duo, 2 GHz, 2GB	4.3 GB	17 min
Core2duo, 2 GHz, 2GB	471 MB	165 s
Pentium 4, 3 GHz, 1GB	2200 MB	10 min
Pentium 4, 3 GHz, 1GB	1100 MB	6 min
Pentium 4, 3 GHz, 1GB	300 MB	105 s
Disk Image, Xfce desktop	1.1 GB	95 s
Disk Image, Ubuntu 16.04	3.3 GB	5 min
Disk Image	630 MB	42 s

FAI references

