Linux Distributions

Introduction into the linux distro jungle

logo tux tux

Was ist eine Distribution?

- Linux Geschmacksrichtung

- Kernel Gemeinsam

- Der Rest ist austauschbar

- Fokus: user-friendly, user-centric, commercial

- Package managers

    - dpkg

    - Pacman

    - Portage

    - Nix package manager

    - Snap

    - ...

- Repositories

Debian (1993)

- Package manager: **dpkg** (APT)

- Sehr stabil

- 400MB / 3GB (!Desktop/Desktop)

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Ubuntu (2004)

- Einsteigerfreundlich

- Desktop / Server / Core

- Package manager: **dpkg** (APT), Snap

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Arch Linux (2002)

- Rolling Release: Immer aktuell

- Minimalistische Distro

- Package manager: **pacman** (AUR)

- Alles wird selbst installiert und konfiguriert

- 400MB

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EndeavourOS (2019)

- Komfortabler Installer

- Minimalistische Distro

- Package manager: **pacman** (AUR)

- Community-driven

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SteamOS

- Fokus: **Gaming**

- Entwickelt von Valve

- Steam Deck

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Linux vs Windows tested in 10 games - Linux 17% faster on Average

source

Fedora (2003)

- Gesponsert von Red Hat

- RedHat upstream

- Sehr aktuell, experimentell

- Package manager: **dnf**

- Fokus: Entwickler und neue Technologien

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openSUSE (2005)

- Cooles logo

- Packages werden gut durchgetestet

- Konfigurationswerkzeug: **YaST**

- Package manager: **zypper**

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NixOS (2003)

- Deklarative Konfiguration (=> Einfach reproduzierbar)

- Einfache Rollbacks

- Package manager: **nix**

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```
{...}: {
  services.avahi = {
    enable = true;
    nssmdns4 = true;
    openFirewall = true;
    publish = {
      enable = true;
      addresses = true;
      domain = true;
      hinfo = true;
      userServices = true;
      workstation = true;
    };
  };

  networking = {
    networkmanager.enable = true;
    firewall.enable = true;
  };

  services.mullvad-vpn.enable = true;

  programs.ssh.startAgent = true;

  hardware.bluetooth = {
    enable = true;
    powerOnBoot = true;
    settings = {
      General = {
        Enable = "Source,Sink,Media,Socket";
      };
    };
  };
}
```

Gentoo (2000)

- Source-Based Distro

- Extrem anpassbar

- Nutzer kompiliert Pakete selbst (Performance-Optimierung)

- Package manager: **Portage**

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```
COMMON_FLAGS="-march=native -O2 -pipe"

USE="wayland -X iptables dist-kernel zsh-completion networkmanager vaapi \
     dbus -elogind pipewire alsa -kde -qt3 -qt4 -qt3support tray"

MAKEOPTS="--jobs 8 --load-average 9"

CFLAGS="${COMMON_FLAGS}"
CXXFLAGS="${COMMON_FLAGS}"
FCFLAGS="${COMMON_FLAGS}"
FFLAGS="${COMMON_FLAGS}"

L10N="de en en-GB en-US"

VIDEO_CARDS="intel nvidia"

LC_MESSAGES=C.utf8

ACCEPT_KEYWORDS="~amd64"
```

Android-Based Distributions

- GrapheneOS

- LineageOS

- ChromeOS

- ...

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Red Star OS

- Nordkoreanisches Linux
- UNSERE DATEN

Suicide Linux

- Incorrect commands get converted to `rm -rf /`

UwUntu

- UwU

Faktoren:

- LTS-Release <---> Rolling Release

- Bloated <---> Minimal

- Security <---> Convenience

- Control <---> Guided

- Skill level <---> Skill issue

GENTOO - DEMO

I use gentoo btw.