Arch Installation Cheat Sheet

Preparation

```
# Load keyboard layout (replace de with us, fr, es if needed)
loadkeys de-latin1


# Connect to WLAN (if not LAN)
iwctl --passphrase [password] station wlan0 connect [network]


# Check internet connection
ping -c4 www.archlinux.org


# List harddrives
lsblk


# Create partitions
gdisk /dev/sda
# Partition 1: +512M ef00 (for EFI)
# Partition 2: Available space 8300 (for Linux filesystem)
# Write w, Confirm Y


# Sync package
pacman -Syy
```

Base Installation

```
# Sync time
timedatectl set-ntp true

# Format partitions (Replace [EFI] and [BOOT] with your partitions shown with lsblk)
mkfs.fat -F 32 /dev/[EFI];
mkfs.btrfs -f /dev/[ROOT]

# Mount points for btrfs
mount /dev/[ROOT] /mnt
btrfs su cr /mnt/@
btrfs su cr /mnt/@cache
btrfs su cr /mnt/@home
btrfs su cr /mnt/@snapshots
btrfs su cr /mnt/@log
umount /mnt

# btrfs configuration
mount -o compress=zstd:1,noatime,subvol=@ /dev/[BOOT] /mnt
mkdir -p /mnt/{boot/efi,home,.snapshots,var/{cache,log}}
mount -o compress=zstd:1,noatime,subvol=@cache /dev/[BOOT] /mnt/var/cache
mount -o compress=zstd:1,noatime,subvol=@home /dev/[BOOT] /mnt/home
mount -o compress=zstd:1,noatime,subvol=@log /dev/[BOOT] /mnt/var/log
mount -o compress=zstd:1,noatime,subvol=@snapshots /dev/[BOOT] /mnt/.snapshots
mount /dev/[EFI] /mnt/boot/efi

# Install base packages
pacstrap -K /mnt base base-devel git linux linux-firmware vim openssh reflector rsync amd-ucode

# Generate fstab
genfstab -U /mnt >> /mnt/etc/fstab
cat /mnt/etc/fstab

# Chroot to installed sytem
arch-chroot /mnt
```

Configuration

```
# Set System Time
ln -sf /usr/share/zoneinfo/Europe/Berlin /etc/localtime
hwclock --systohc

# Update reflector
reflector -c "Germany," -p https -a 3 --sort rate --save /etc/pacman.d/mirrorlist

# Synchronize mirrors
pacman -Syy

# Install Packages
pacman --noconfirm -S grub xdg-desktop-portal-wlr efibootmgr networkmanager network-manager-applet dialog wpa_supplicant
mtools dosfstools base-devel linux-headers avahi xdg-user-dirs xdg-utils gvfs gvfs-smb nfs-utils inetutils dnsutils bluez
bluez-utils cups hplip alsa-utils pipewire pipewire-alsa pipewire-pulse pipewire-jack bash-completion openssh rsync
reflector acpi acpi_call dnsmasq openbsd-netcat ipset firewalld flatpak sof-firmware nss-mdns acpid os-prober ntfs-3g
terminus-font exa bat htop ranger zip unzip neofetch duf xorg xorg-xinit xclip grub-btrfs xf86-video-amdgpu xf86-video-
nouveau xf86-video-intel xf86-video-qxl brightnessctl pacman-contrib

# set lang utf8 US
echo "en_US.UTF-8 UTF-8" >> /etc/locale.gen
locale-gen
echo "LANG=en_US.UTF-8" >> /etc/locale.conf

# Set Keyboard (German Keyboard Layout)
echo "FONT=ter-v18n" >> /etc/vconsole.conf
echo "KEYMAP=de-latin1" >> /etc/vconsole.conf

# Set hostname and localhost
echo "arch" >> /etc/hostname
echo "127.0.0.1 localhost" >> /etc/hosts
echo "::1         localhost" >> /etc/hosts
echo "127.0.1.1 arch.localdomain arch" >> /etc/hosts

# Set Root Password
passwd root

# Add User (Replace [USERNAME] with your name)
useradd -m -G wheel [USERNAME]
passwd [USERNAME]

# Enable Services
systemctl enable NetworkManager
systemctl enable bluetooth
systemctl enable cups.service
systemctl enable sshd
systemctl enable avahi-daemon
systemctl enable reflector.timer
systemctl enable fstrim.timer
systemctl enable firewalld
systemctl enable acpid

# Grub installation
grub-install --target=x86_64-efi --efi-directory=/boot/efi --bootloader-id=GRUB --removable
grub-mkconfig -o /boot/grub/grub.cfg

# Add btrfs and setfont to mkinitcpio
# Before: BINARIES=()
# After:  BINARIES=(btrfs setfont)
sed -i 's/BINARIES=()/BINARIES=(btrfs setfont)/g' /etc/mkinitcpio.conf
mkinitcpio -p linux

# Add user to wheel: uncomment #%wheel ALL=(ALL:ALL) ALL
EDITOR=vim sudo -E visudo
usermod -aG wheel $username

# Restart
exit
shutdown -h now
```