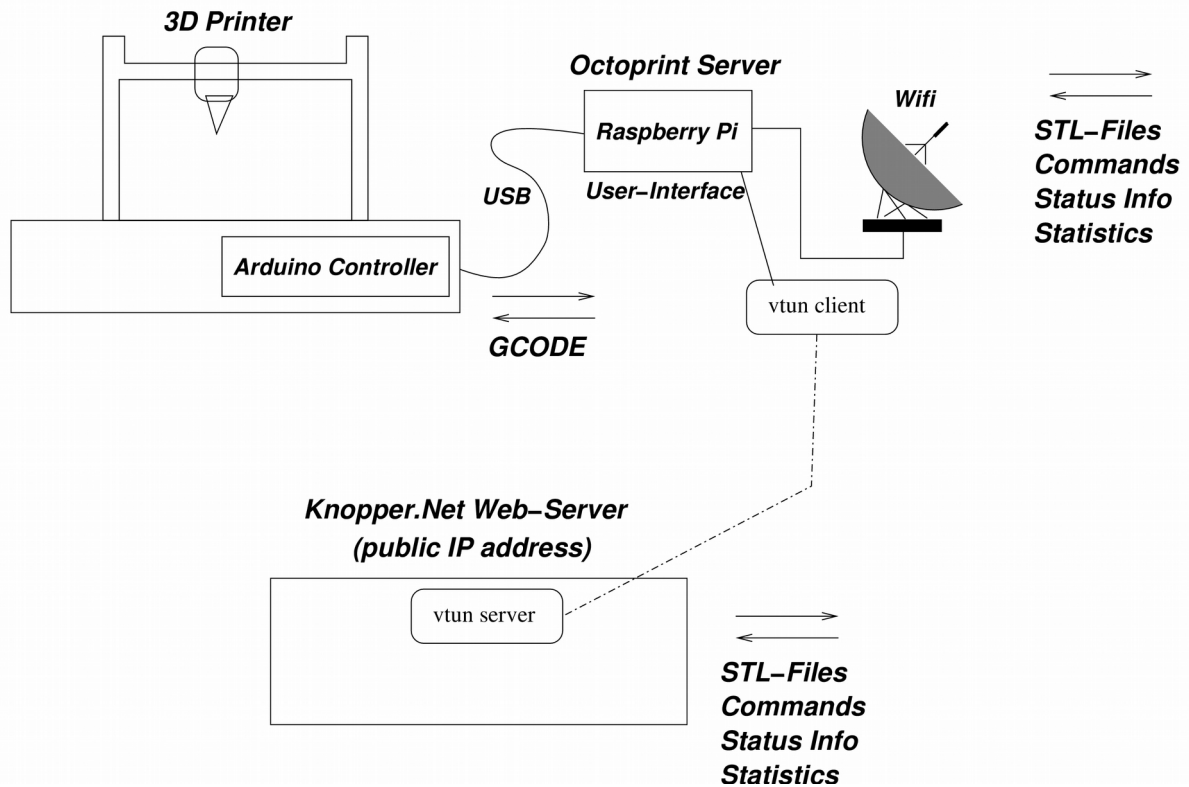


# Octoprint auf Raspberry Pi

3D Drucker übers Web steuern und beobachten



Benötigt:

1. Raspberry Pi (2) und ein Drucker mit GCODE-USB-Support (Reprap, Marlin Firmware, meist Arduino-basiert)
2. Octoprint Server für Raspberry Pi (gibt es auch als fertiges Image) (<http://www.octoprint.org/>)
3. Für das virtuelle Netzwerk (Optional):
  - vtun (sudo apt-get install vtun)
  - apache mit proxy-Erweiterung auf Server im Internet-Route

Vtun-Konfigdateien für das Tunneln der privaten IP-Adressen auf einen Server im Internet:

```
# /etc/vtund.client.conf
# VTUND example. Client 'octopi'.
octopi {
  passwd geheim;    # Password
  persist keep;    # Persist mode, don't remove and re-add on reconnect
  up {
    # Connection is Up
    # Assign IP addresses.
    ifconfig "%%" 10.106.0.2 pointopoint 10.106.0.1 mtu 1450";
    route "add -net 10.106.0.0 netmask 255.255.255.0 gw 10.5.0.1";
  };
  down {
    route "del -net 10.106.0.0 netmask 255.255.255.0 gw 10.5.0.1";
  };
}
```

```
};  
}
```

---

```
# /etc/vtund.server.conf (auf dem Server im Internet)  
# ----- CUT HERE --- Server config --- CUT HERE -----
```

```
options {  
    port 5555;          # Listen on this port.
```

```
    # Path to various programs
```

```
    ppp      /usr/sbin/pppd;
```

```
    ifconfig /sbin/ifconfig;
```

```
    route   /sbin/route;
```

```
    firewall /sbin/ipchains;
```

```
}
```

```
# Default session options
```

```
default {
```

```
    compress yes;      # Compression is off by default
```

```
    speed 0;          # By default maximum speed, NO shaping
```

```
}
```

```
# VTUND example. Client 'octopi'.
```

```
octopi {
```

```
    multi killold;    # Allow multiple connections to this session
```

```
    password geheim; # Password
```

```
    type tun;        # IP tunnel
```

```
    proto tcp;       # TCP protocol
```

```
    compress lzo:1;  # LZO compression level 9
```

```
    encrypt yes;     # Encryption
```

```
    keepalive yes;  # Keep connection alive
```

```
    up {
```

```
        # Connection is Up
```

```
        # 10.106.0.1 - local, 10.106.0.2 - remote
```

```
        ifconfig "%%" 10.106.0.1 pointopoint 10.106.0.2 mtu 1450";
```

```
    };
```

```
}
```

---

```
# /etc/defaults/vtun auf Server und Client, um den vtun-Server mit den richtigen  
# Konfigurationen zu versorgen:
```

```
# Client:
```

```
# Defaults for vtun initscript
```

```
# sourced by /etc/init.d/vtun
```

```
# Created by the maintainer scripts
```

```
CLIENT0_NAME=octopi
```

```
# Destination host
```

```
CLIENT0_HOST=meinserver.de
```

```
# Optional parameters (Zielport)
```

```
CLIENT0_ARGS="-f /etc/vtund.client.conf -P 5555"
```

---

```
# Server
RUN_SERVER=yes
SERVER_ARGS="-P 5555 -f /etc/vtund.server.conf"
```

---

```
# This is .htaccess in my web directory
# Apache Proxy Module must be present
```

```
RewriteBase /
RewriteCond %{REQUEST_URI} !octopi/
RewriteCond %{REQUEST_URI} !octoprint/
RewriteCond %{HTTP_HOST} octopi.meinserver.de$ [OR]
RewriteCond %{HTTP_HOST} octoprint.meinserver.de$ [OR]
RewriteCond %{REQUEST_URI} ^/octopi [OR]
RewriteCond %{REQUEST_URI} ^/octoprint
RewriteRule ^(.*)$ http://10.106.0.2/$1 [P]
```

---

Der Apache-Server wird nun bei Abruf einer Seite von octoprint.meinserver.de einen internen Redirect auf den getunnelten octoprint durchführen.