Helmut 4

Tech Specs

Software Documentation
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1. Tech Specs

1.1. Helmut Host System

System Requirements:

- CPU: 8 core (virtual or physical)
- OS: Ubuntu 18.04 or 20.04 LTS
- RAM: 16GB+
- Storage: 200GB+ to host containers etc
- Ethernet: provided by Host: 1 GbE minimum, 10GbE for file move/copy operations on server stream (not recommended)
- Internet: Internet connection and registration are necessary for required software deployment.
- Permanent connection to repo.moovit24.de:443 for Stack sync and access to container images
- Helmut4 needs root access on host OS
- Helmut4 needs a shared storage location to run properly

1.2. HelmutIO Renderserver based on Adobe Media Encoder

For detailed information on minimal requirements and/or recommended systems, please refer to the official Adobe Media Encoder website:

For Adobe Media Encoder 2020/2021:

https://helpx.adobe.com/media-encoder/system-requirements/2021.html

For Adobe Media Encoder 2022:

https://helpx.adobe.com/media-encoder/system-requirements.html

Minimum System Requirements:

- CPU: Intel 6th Gen or newer CPU
- OS: Microsoft Windows 10 (64-bit), version 2004 v1903 or later / MacOS 10.12 or later (M1 experimental with limitations)
- RAM: 16GB of RAM
- GPU: See Adobe-recommended GPU cards (Quadro K series or higher, Intel Iris HD/Pro/X/Plus, AMD RadeonPro/FirePro):

    https://helpx.adobe.com/sk/premiere-pro/system-requirements.html#gpu-acceleration
- Ethernet: 1 GbE minimum, 10GbE for file move/copy operations or heavy rendering
- Internet: Internet connection and registration are necessary for required software activation (Adobe), validation of subscriptions, and access to online services if required.

Recommended System Requirements:

- CPU: Single socket system with AMD TR 3970X, Intel i9 10980X or Xeon W-3345 or similar. Clock speed to be prioritized over core count.
- OS: Microsoft Windows 10 (64-bit), version 2004 v1903 or later / MacOS 10.12 or later
- RAM: 64GB or more
- GPU: Nvidia Quadro RTX A4000 or better.
- Ethernet: 10GbE
- Internet: Internet connection and registration are necessary for required software activation (Adobe), validation of subscriptions, and access to online services if required.

Please visit adobe.com for the latest recommendations on hardware and operating systems.

1.3. Linux Based HelmutIO Renderserver

- Linux client runs in Docker environment
- CPU: min. 2 Cores allocated
- OS: see Helmut Server requirements
- RAM: min 2GB of RAM
- GPU: not supported
- Ethernet: provided by Host: 1 GbE minimum, 10GbE for file move/copy operations or heavy rendering.
- Internet: Internet connection and registration are necessary for required software deployment and access to online services if required.

1.4. Linux Client

The Linux Client is quite similar to the common Helmut Client and has the same functionality when it comes to pickup and execute jobs. Since it is running inside a docker linux environment its functionality is limited by the availability of apps installed to that OS, but e.g. there is no possibility to use Adobe related nodes. Not having a user interface for the Linux OS, UI interacting nodes will not work either or at least have no visible effect. Beside of this a Linux Client is capable of processing jobs the same way a Windows or Mac Client can do but provides more flexibility.

Examples:

- Spin up multiple clients or shut them down again according to the amount of queued jobs in the dashboard
- Centralizing processes and offload performance from Win/Mac workstations to the Linux Client(s) like project index, file copy processes, prestream handling, FFMPEG rendering, communicating with third party apps and so on

It is mandatory to setup an Autologin file to let the client connect automatically. Moreover FFMPEG can be activated optionally and Mediainfo is preinstalled already. Please contact the MoovIT Support Team for further information regarding installation and setup of the Linux Clients.

1.5. Supported Adobe Versions

- Premiere Pro 2020 (14.x)
- Premiere Pro 2021 (15.2)
- Media Encoder 2020 (14.x)
- Media Encoder 2021 (15.2)
- Audition 2020 (14.2)

1.6. How is the license model working?

- Perpetual licenses for all core components (FX/IO/CO/HK)
- Core components can be purchased separately.
- Core components depend on each other:
  - First product FX
  - Second product IO
  - Third product CO
  - Fourth product HK
- Core components can be purchased with or without licenses
  - FX Starter Package incl. 10 user licenses
  - FX Core Package without user licenses
  - IO Starter Package incl. 10 user licenses
  - IO Core Package without user licenses
  - CO Starter Package incl. 10 user licenses
  - CO Core Package without user licenses
  - HK Starter Package incl. 10 user licenses
  - HK Core Package without user licenses
- User licenses are floating licenses and can be used in any core component

1.7. Helmut Endpoints

- Helmut4 Client: http://localhost:8880/v1/hc/info
- AME Panel: http://localhost:4714/
- Premiere Panel: http://localhost:4716
- After Effects Panel: http://localhost:4717

1.8. Ports/Repository/Change Log

- Repository > https://repo.moovit24.de/repos
- API > https://moovit-openapi.herokuapp.com
- DNS > UDP port 53
- SMB > TCP port 137,138,139,445 (may vary depending on the storage)
- LDAP > TCP and UDP port 389
- SMTP > TCP port 25
- Helmut Client > TCP port 80 or 443 when using SSL
- Changelog > https://github.com/moovit-gmbh/helmut4/blob/master/CHANGELOG.md

1.9. Debug on Client on Mac

- sudo chmod 777 /Applications/Helmut4.app/Contents/Resources/jre/bin/java
- /Applications/Helmut4.app/Contents/Resources/jre/bin/java -jar
- /Applications/Helmut4.app/Contents/Resources/HelmutClient.jar --logging.level.org=DEBUG

1.10. Release Cycles

1.10.1. Stable Releases

- A stable release will be published every 3 months (March/June/September/December)
- To update to a stable release use the command: **"helmut-snapshot <snapshot_version_number>"**
  - Snapshot number of a release version is shown in the change-log.
  - This is the version for production systems.
  - This version is covered by the support contract, and the software maintenance agreement is valid for this version
  - Bugs will be fixed in stable releases (if critical)

1.10.2. Snapshot Releases

- A snapshot release will be published every 2nd week
- To update to a snapshot release use the command: **"helmut-snapshot <snapshot_version_number>"**
  - Snapshot number of a snapshot version is shown in the change-log (unstable).
  - These versions are only for staging systems and NOT for production systems.
  - Snapshot versions are not covered by the software maintenance contract between MoovIT and the customer, although MoovIT supports such a version. If there is a critical error in such a version, MoovIT assumes no responsibility.
  - Bugs will be fixed within snapshot releases (all).
  - Feature requests (if implemented) are added to the weekly snapshots and published as stable features every 3 months.

1.10.3. Dev Releases

- DEV releases are only for internal use and password protected.
- To update to a snapshot release use the command: **"helmut-update"**

2.   Install Guide

2.1.   Helmut4 with any Storage

Helmut is storage agnostic. Helmut needs at least one share to be used properly, but it can be used with multiple shares. Any share needs to be mounted on the linux host system as well as within specific docker containers.

2.1.1.   Mount Volume on Linux

- Log into the Helmut4 server (ubuntu 18.04) mount the share in the fstab:
    - create the mountpoint —> sudo mkdir /mnt/mediaspace_name
    - edit the fstab —> sudo nano /etc/fstab
    - mount the space —> sudo mount -a and check if it's mounted

2.1.2.   Install Helmut4

- Install Helmut4 using: sudo su (you need to be root, otherwise the install will fail)
- Run this script: "curl -s https://repo.moovit24.de/install/setup.sh | bash "
- After the installation has been successful, please update to the desired version. It is not possible to downgrade. To Update to the desired version please use:
    - **"helmut-snapshot <snapshot_version_number>"**
    - Example:
        - If you want to install Version 4.0.4 please use:
            - **helmut-snapshot 4.0.4-release-0**
        - The correct version numbers can be found in the change-log

2.1.3.   Add Volumes to the Docker Containers (see figure 2.1)

To be sure Helmut is working as expected, the volumes, the server should have access to need to be mapped into to Docker Containers. There are 5 different containers that always have to have access to specific Volumes to run specific tasks. Fo example: If the server should create projects on a specific volume, this volume needs to be mapped into the FX Container, as this container is responsible for creating projects. To add volume to a container follow these steps:

- Login into portainer: http://IP-Address-of-your-helmut-server:9000 (user:admin/password:admin)
- click on "primary"
- click on "stacks"
- click on "helmut4"
- click on the Tab "Editor"
- The volumes mounted on linux, muss be mapped into the following containers: FX, IO, CO, Streams, Users
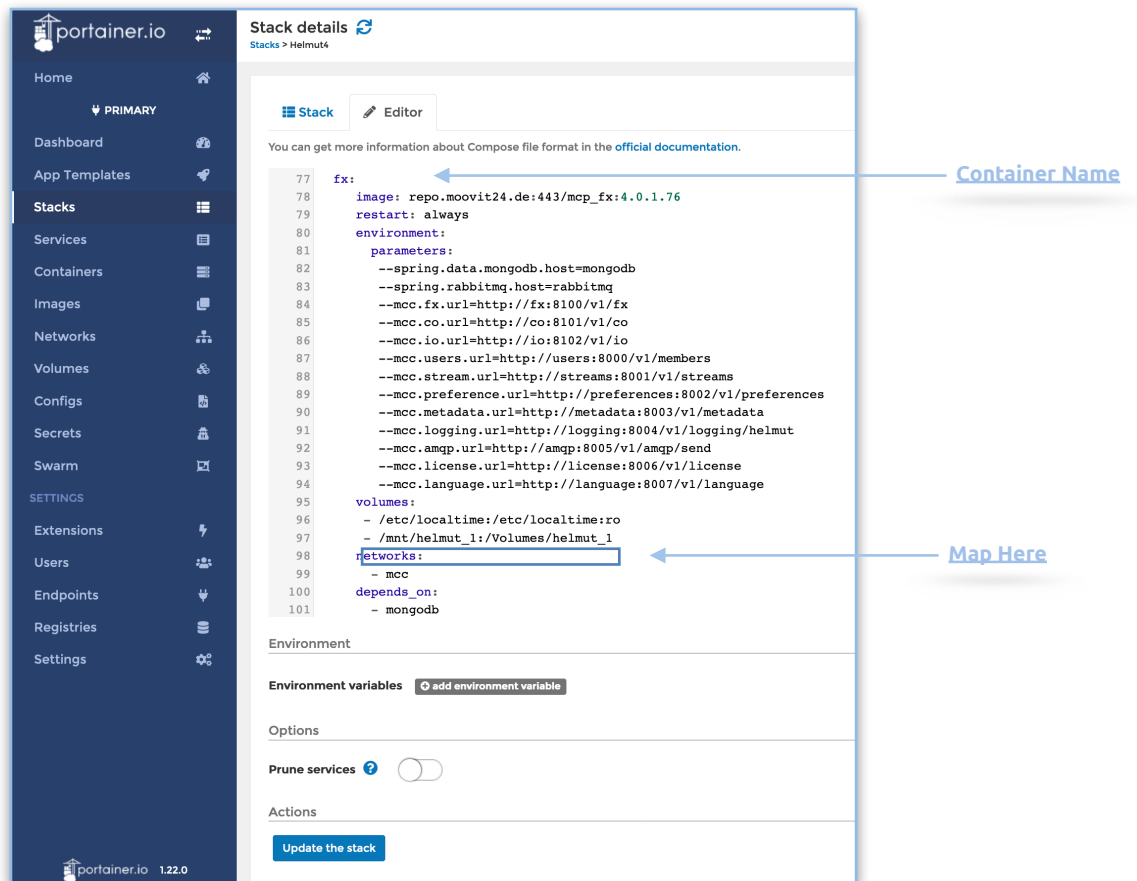- Click on Update the Stack

Figure 2.1. Portainer - Stack File

2.1.3.1. Container Name

Shows the name of the container to which the Volumes will be added.

2.1.3.2. Map here

Every drive that is to be added to the system must be mapped into the container. To do this, the drive must first be mounted at the operating system level. The drive mounted at the operating system level is now mapped into the Docker container in the following way:

Drive on operating system level: **/mnt/helmut_1**

Drive on Docker container level: **/Volumes/helmut_1**

Drive mapped between operation system level and Docker container:

    - /mnt/helmut_1:/Volume/helmut_1

2.1.4.   Configure Network on Linux

- Configure a static network address;
  - sudo nano /etc/netplan/50-cloud-init.yaml
  - it should look like this:
    - network:
    - ethernets:
    - ens160:
    - addresses: [192.168.123.109/24]
    - gateway4: 192.168.123.254
    - nameservers:
    - addresses: [192.168.123.221]
    - dhcp4: no
    - version: 2

2.2.   Install Helmut Client

The Helmut 4 Client can be downloaded from the Helmut4 website. To reach the page, please enter the ip address of the Helmut 4 server in the browser. The supported browsers are Chrome and Firefox in the latest version. It is recommended to use Chrome.
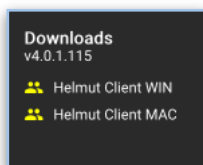

Figure 2.2. Downloads

The Helmut4 Client is available as a Windows and Mac version. The Windows version can also be installed as a service to run the client in the background on a rendernode (HIO). This is only recommended if an administrator is able to set up the appropriate permissions for the Helmut Client so that it has write and read rights at root level.