Technical explanations regarding physical devices

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Pipeline - Explanations - Showcase television

Above our kitchen countertop you'll find a television that shows our latest ShotGrid versions and any local files that students submit. Occasionally it will also display a real-time calculated fact about our render farm usage. The system is quite simple and consists of three Python programs, two running on our Automation server and one running on a Raspberry Pi that you'll find attached to the television.

Server script

Every 30 seconds the script checks for new ShotGrid versions, if a new one is found it's transcoded to a 1920x1080 MP4 using FFMPEG. The transcoded files are placed here:

`\\nfa-vfxim-education.ahk.nl\vfxim\Showcase\transcoded_media`

The script also checks for local files, which students can place in the following folder:

`\\nfa-vfxim-education.ahk.nl\vfxim\Showcase\dump_footage_here`

These files are ingested into the transcoded media folder and then deleted from the dumping folder.

Files older than a week also get deleted by this script.

Raspberry Pi script

The Raspberry Pi script is very simple. It just gets all the files from the transcoded_media folder, shuffles them and plays them using OMX player. It's got a small extra bit of code though: Whenever a file called `instant_play.mp4` is found in the transcoded media folder, that files gets played next and then deleted. This is how the real-time render farm facts get displayed!

Render farm facts

Another Python program runs on the automation server. Roughly every 2 minutes it calculates a random fact from data gathered through the Deadline Web Service API, which gets rendered onto a video backdrop and then copied to the transcoded media folder as a file called instant_play.mp4. A bunch of facts are available, they all have a unique chance of being picked and some facts are only available on certain days of the week. You should have a look at the code on our Gitlab, it's quite fun!

Original Showcase system by Gilles Vink, rewritten by Mervin van Brakel.

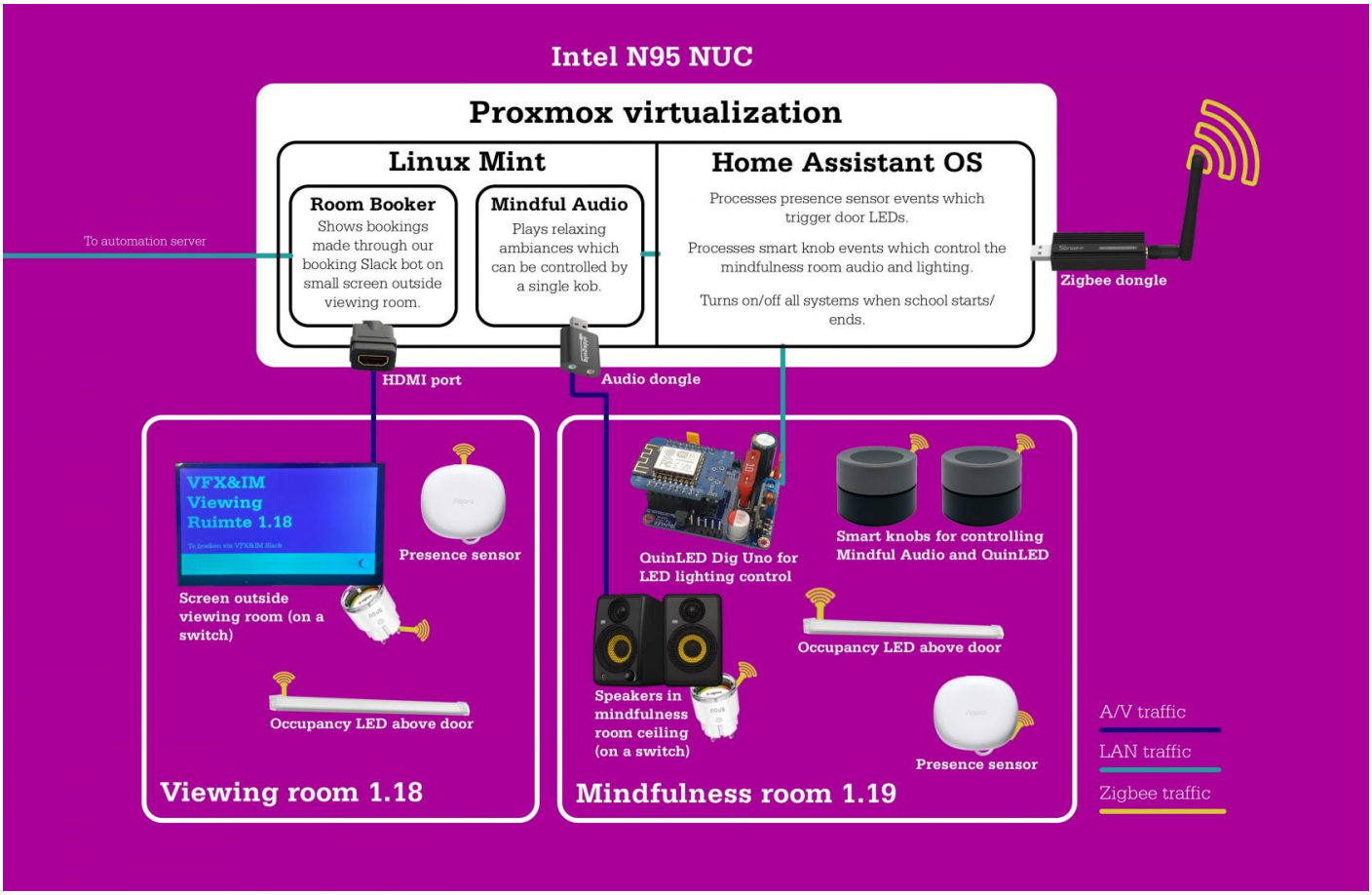
Pipeline - Explanations - Viewing booking system

The viewing booking system called Room Booker consists of a couple parts. In-depth explanations about how it works can be found on the Room Booker GitHub page. The backend runs on our Automation server. In the viewing room, above the door on top of the light panel, sits a small computer which is connected to the display outside the door. This computer runs Linux Mint in a virtualized environment through Proxmox, though Mint does have full access to the video card which allows it to output through HDMI. Proxmox can be accessed on https://145.90.27.92:8006. Reboot Linux Mint from there in case the display is not showing any output, as it seems that sometimes the display is not initialized properly when Linux Mint reboots itself.

Viewing booking system by Mervin van Brakel.

Pipeline - Explanations - Mindfulness room audiovisual installation

Here's an infographic:



The proxmox instance can be accessed on: `https://145.90.27.92:8006` (username is root, the password used is the old super *user* password that was used in the Deadline monitor some time ago). You can SSH into it using the same credentials.

The Home Assistance instance on: `http://145.90.27.99:8123` (username is vfxim, the password used is the old super *user* password that was used in the Deadline monitor some time ago)

And you can log into the Mint machine with: `ssh vfxim@145.90.27.152` (the password used is the old super *user* password that was used in the Deadline monitor some time ago)

Hardcoded IPs

There are two points in the system that use hardcoded IP addresses. Seeing as the proxmox, home assistant and mint instances don't have static IP addresses this might cause some problems at some point. Here's what you should do when this happens.

Home Assistant IP Changed

Browse to the Docker backend, find the Farm Facts container and change the IP address used in the `.env` file.

Linux Mint IP Changed

Browse to the Home Assistant instance, go to the Visual Studio Code server and change the `send_to_sound_system` IP string that you can find in `configuration.yaml`