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BIZON

UNFINISHED LECTURE NOTES

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These notes are, by their very nature, unfinished, and they improve with every reader. If you spot an error, disagree with a framing, or want to add a source, a question, or a position, open a pull request at https://github.com/Quillstacks/LectureMaterial/tree/main/lecturenotes/notes_bizon. Every contribution is welcome.



2026-10-22 · bubbly passionfruit Maulwurf

“FREEDOM IN A COMMONS BRINGS RUIN TO ALL.”

GARRETT HARDIN, THE TRAGEDY OF THE COMMONS, 1968

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Introduction

This is a manual. It gets you onto the DHBW's Bizon, a Linux deep learning server with NVIDIA GPUs, reachable from inside the DHBW network only. This is a powerful compute substrate, use it. Then again you will never be alone on this machine, so be kind to data, jobs, and artifacts on this machine. Sandbox whatever you do, so you don't hamper the work of others. On the other hand, expect that someone else could nuke your stuff, so backups are advised. If you put stuff on that machine, expect that someone else will be able to see and use it.

This is currently a quickstart only, so chapters on how to set up a proper project structure and environment are highly appreciated. Same holds for a chapter on how to effectively run jobs on a shared GPU server. Anything is worth adding that you would have loved to have known before diving deep. The goal is to have a short, concise, and practical manual for the Bizon over time. If a step is deprecated or you found a better way, contribute it back.

The official documentation. The DHBW guide for students, Nutzung des Deep Learning Servers Bizon, version 1.2. It also covers Miniconda, udocker containers, and Jupyter.

Quickstart.

2026-10-22 · jolly blackberry Wiesel

Where the buffalo roam

The Bizon runs on your DHBW account. Log in with the username and password of the lab PCs. On the server, the username carries the domain: `<username>@ab.ba.ba-ravensburg.de` [1]. The Bizon's address comes by mail, as a setup package.

Your account is one of many on a shared machine. Store nothing sensitive on it, leave other users' files and processes alone, and sandbox your stuff. Protect yourself from others, and protect others from yourself. The Bizon is used most efficiently when you spend as little time as possible to deploy your jobs and leave, not for interactive development. If you need to develop interactively, please do so on your own machine.

The Sophos VPN takes you into the DHBW network. On campus you are already inside. Off campus, open `https://vpn-rv.dhbw-ravensburg.de`, log in to the user portal with your DHBW credentials, open the page `VPN`, and download the client and the configuration. Then connect with your DHBW credentials:

- Windows: Sophos SSL VPN Client, tray icon, `Connect`.
- macOS: `.ovpn` into Tunnelblick [2], `Connect`.
- Linux: `sudo openvpn --config <file>.ovpn`.

Then log in with the address from the package:

```
ssh -l <username>@ab.ba.ba-ravensburg.de <bizon-ip>
```

Before you start a job, run `nvidia-smi` to see who is on which GPU. Pick a free one and pin your job to it, for example GPU 3:

```
CUDA_VISIBLE_DEVICES=3 python train.py
```

[1] DHBW Ravensburg. Nutzung des Deep Learning Servers Bizon, 2021. Anleitung für Studierende, Version 1.2

Scan the code and send a mail stating your name, course, and what you want to run.

Remember? Chapter 1 of Full Stack Handwerkszeug, Development and Production, covers this split, along with SSH and Linux servers. `https://material.schutera.com/lecturenotes/notes_missingsemester/notes_missingsemester.pdf`

Scan the code for the VPN user portal.

[2] Tunnelblick Project. Tunnelblick: Free Open Source OpenVPN Client for macOS. `https://tunnelblick.net/`, 2026

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