

# The Philosophy of Migration

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# Who am I?

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- Bachelor's Degree in Applied Electronics
- Master's Degree in Quality
- ERASMUS
- System Administrator
- Linux, Monitoring, Cloud

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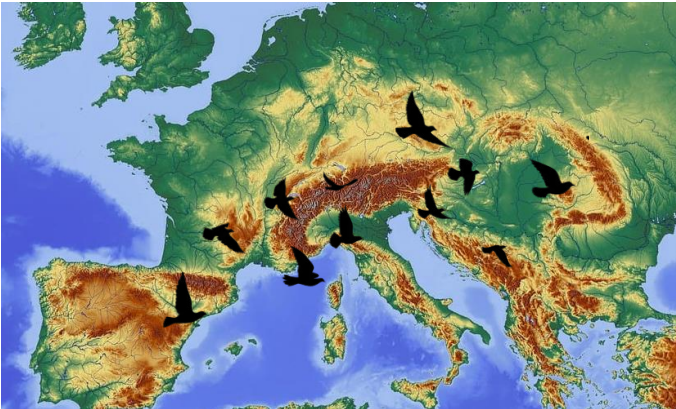
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# 1) Migration

## What is a Migration?

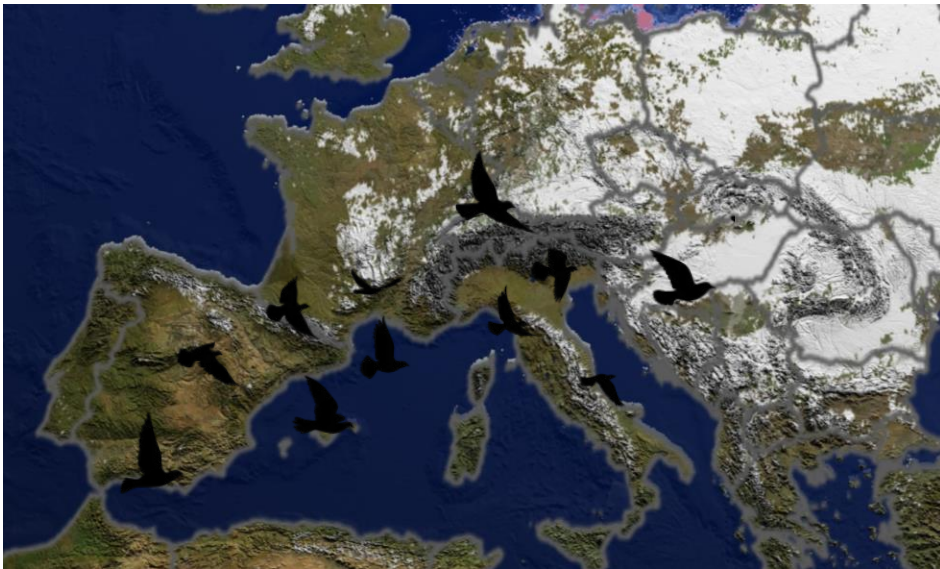
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As of the Cambridge Dictionary, migration can be defined as “the process of animals travelling to a different place, usually when the season changes”.



# Why is migration needed?

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# How does it happen?

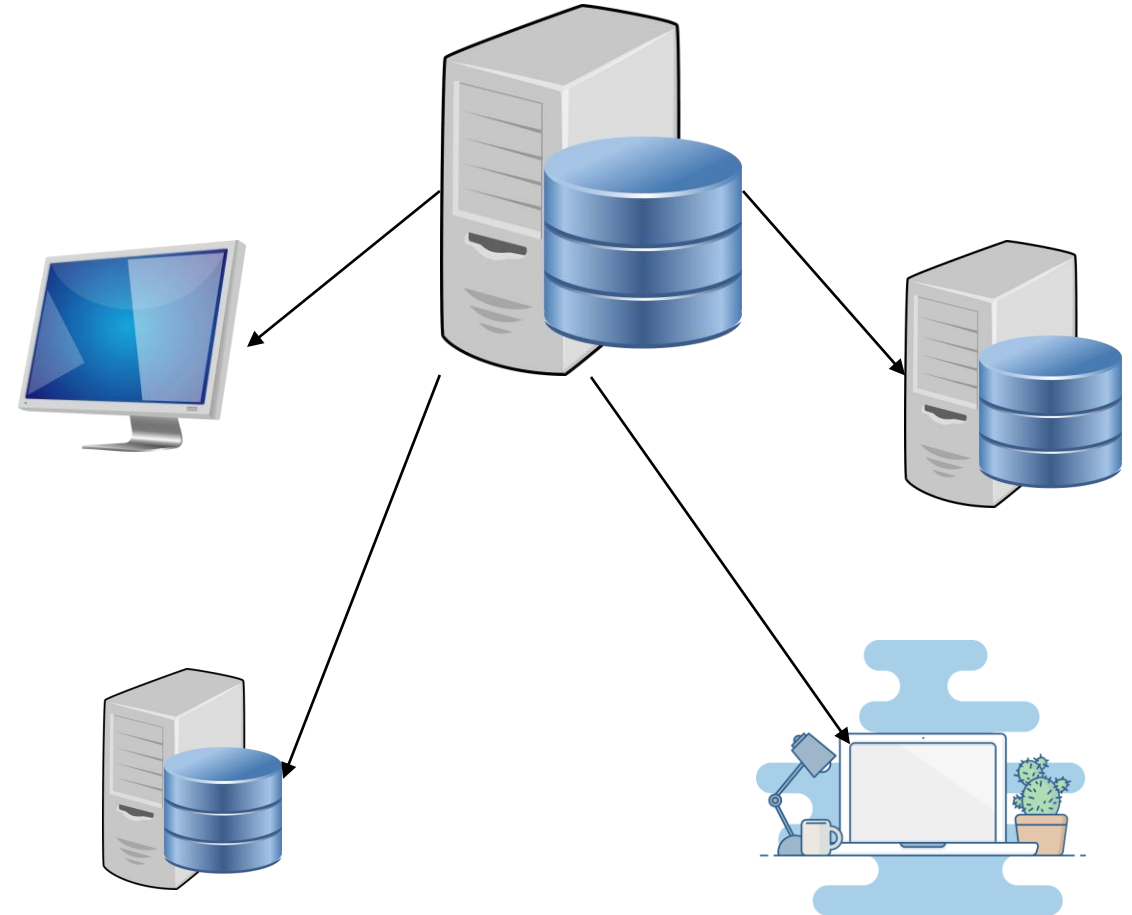
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## 2) Server Migration


### What is a server?

As of the Cambridge Dictionary, a server is “a central computer from which other computers obtain information.”



What is a migration?  Moving the virtual components of a server to another server

Why is a migration needed?  Seasons change in the Server World as well

How does it happen?  Install on the new server everything that is on the old server and synchronize the data between them



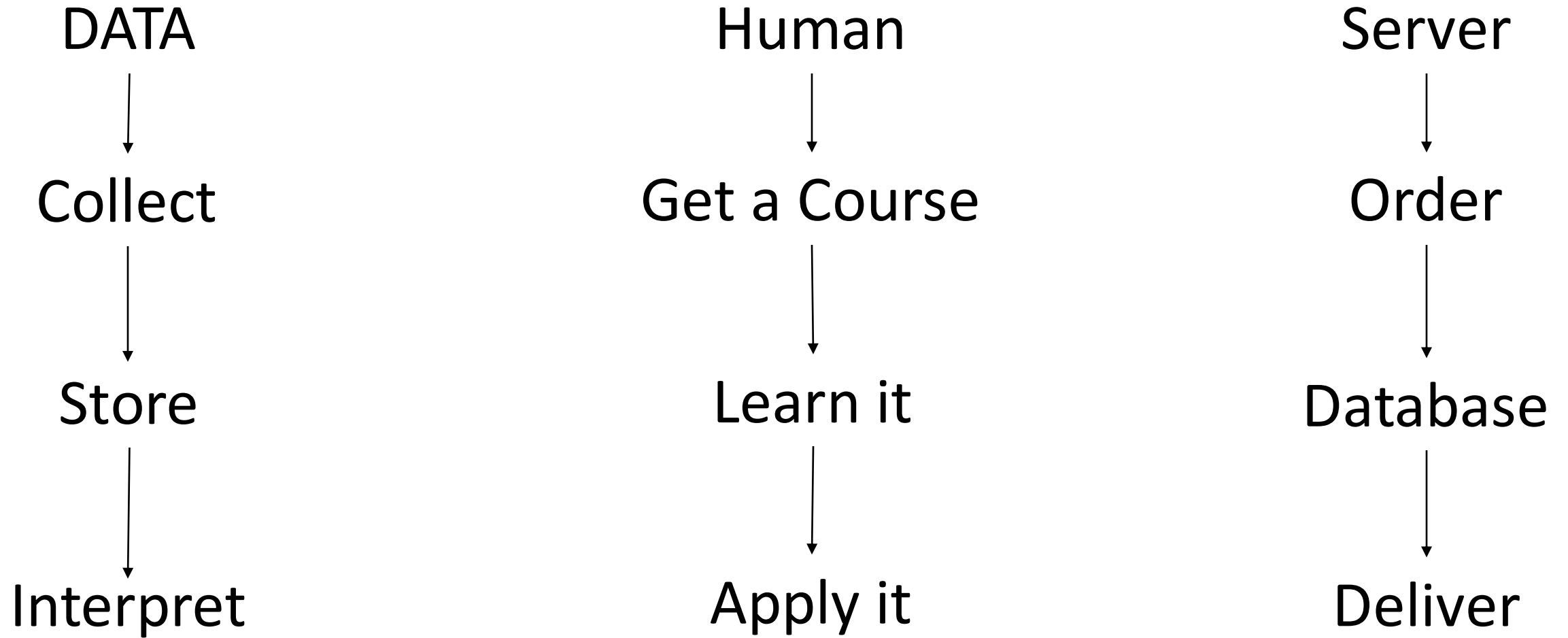


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It's all about the DATA

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# Example



## 3) Migration Plan

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- 1) Check the applications installed on the old server: `pstree`
- 2) Check the versions of the applications: `app_name --version`
- 3) Check the configurations of the applications (files and passwords).
- 4) Install on the new server all the applications that are on the old server with the same configurations and the same versions.
- 5) Check if the versions and configurations are the same on both servers.
- 6) Make sure the servers can communicate: `ip a & ping server_ip`
- 7) Stop the applications and sync the data between the servers: `rsync -avz --delete path/to/data/ user@new_server_ip:/path/to/data`

## 4) Example

It's January 2023. You are tasked to migrate an Ubuntu 20.04 (old server)server that uses, among others, MySQL Server 5.7, to a server that uses Ubuntu 22.04 (new server) as Operating System.

**Problem** → Ubuntu 22.04 does not yet support MySQL 5.7, it only supports MySQL 8.0.

→ ~~Drop all databases and re-install MySQL 8.0 on the new server.~~

→ ~~Export all databases from the old server and import them into the new server.~~

→ On the old server, upgrade MySQL 5.7 to MySQL 8.0 then migrate.

### 3) Migration Plan

- 1) Check the applications installed on the old server: `pstree`
- 2) Check the versions of the applications: `app_name --version`
- 3) Check the configurations of the applications (files and passwords).
- 4) Install on the new server all the applications that are on the old server with the same configurations and the same versions.
- 5)  On the old server, upgrade from MySQL 5.6 to MySQL 8.0 both servers.
- 6) Make sure the servers can communicate: `ip a & ping server_ip`
- 7) Stop the applications and sync the data between the servers: `rsync -avz --delete path/to/data/ user@new_server_ip:/path/to/data`





# Live Demonstration

# Questions?

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Thank you for your attention!

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