

# Migration Framework

## Work Package 2

# Agenda

## Architecture

- Overview

- Features

## Performance Results

## Outlook

# Architecture

## Overview

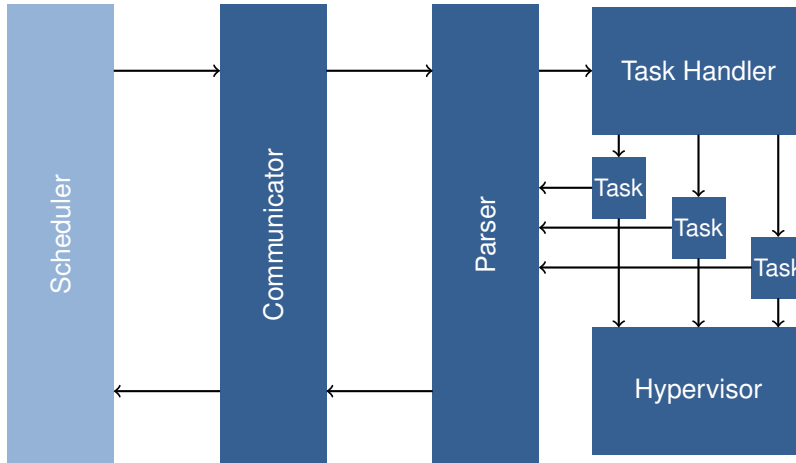
- Hier koennte z. B. ein Schaubild hin, wie man mit dem Migrations-Framwork interagiert.
- Eine zweite Folie koennte die Klassenstruktur etwas erklären und deutlich machen, was man benötigt um das Framwork in existierende andere Projekte zu integrieren

## YAML-Messages

```
---  
task: migrate start  
vm-name: anthe1  
destination: pandora2  
parameter:  
  live-migration: false  
...
```

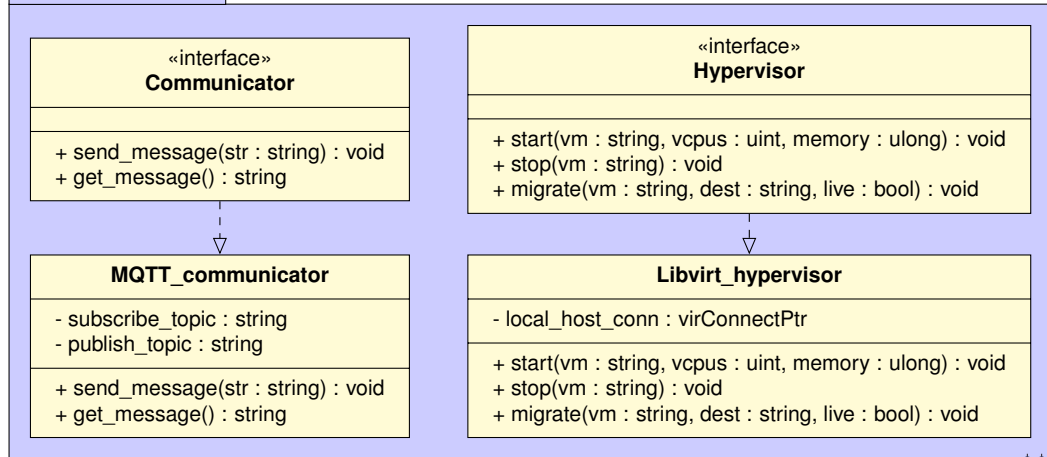
```
---  
result: migrate done  
list:  
  - vm-name: anthe1  
    status: success  
...
```

## Procedure



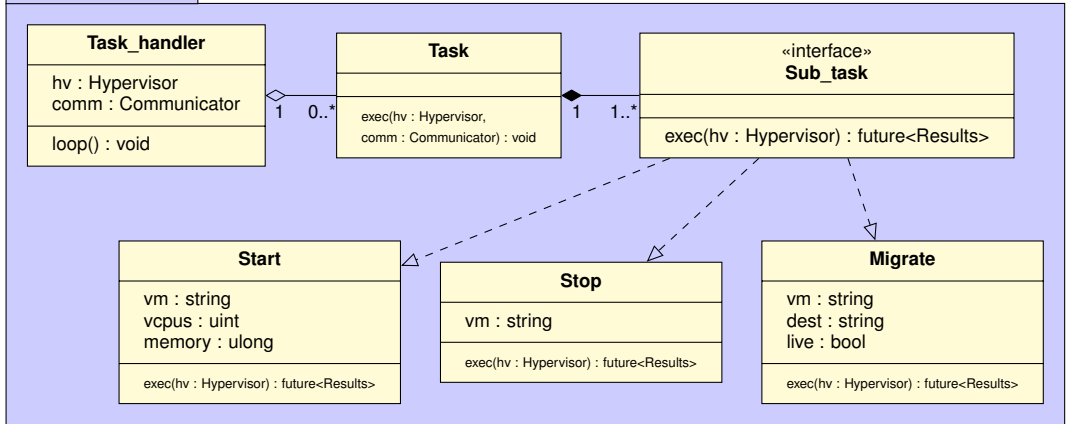
# UML

## Migration-Framework



# UML

## Migration-Framework





## Classes

- Task\_handler is the main loop which gets messages from Communicator, calls parser and launches Tasks in Threads.
- Parser translates YAML messages to Task/Subtask objects and Result objects back to YAML.
- Communicator and Hypervisor are interfaces
  - Implementations: MQTT\_communicator and Libvirt\_hypervisor
  - By adding other implementations the framework can be expanded.
  - Integration in other projects is also possible.
  - e.g. using the Communicator interface to call migration
- Tasks can contain more than one subtask (e.g. "start 5 VMs")
  - each subtask is executed in a separate thread

## Features

### Done:

- All parts are ready (MQTT\_communicator, parser, Task\_handler, Task, Libvirt\_hypervisor)
- Task execution and communication are asynchronous.
- Start, stop and migrate tasks are currently available.

### Missing:

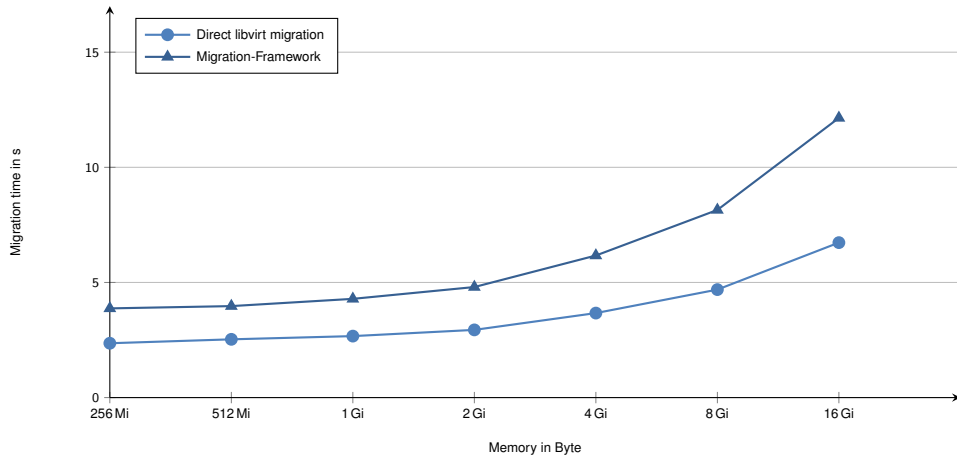
- No details about errors are sent back.
- No possibility to ask status of migration framework
- No PCI attach/detach
- Other pre/post hooks (e.g. reduce memory)

# Performance Results

## Performance Results

- Was kann man deiner Meinung nach alles Messen?
- Wichtig sind vergleichbare Ergebnisse. So solltest du dich z. B. für eine OS, Kernel, Treiber, etc. Konfiguration entscheiden.
- Auf der nächsten Folie habe ich dir mal ein Beispiel angehängt, wie man Graphen mit tikz erzeugen kann.

# Migration Time



# Outlook

## Outlook

- Basics are working
- PCI attach/detach almost done
- Currently working on verbose error reporting
- Plans to create library from parser module

Thank you for your kind attention!

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## Example slides

## Title of the frame that may also go into the second line

- Itemize list
- Itemize list
  - Second layer
    - Third layer
- Itemize List
- Itemize List
  - Second layer

## Title of a frame having paragraphs

- Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
- Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
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## Frame with boxes

### Block 1

Content of the first block

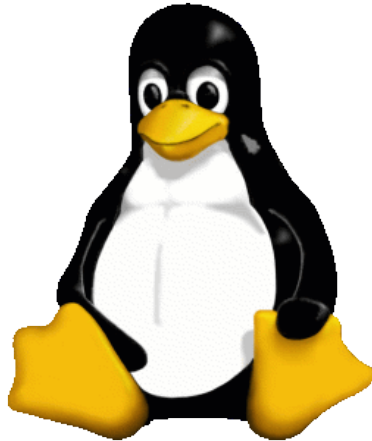
### Another block

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

## More Examples

## How to set columns

- Item 1
- Item 2
- Item 3
- Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



## How to set columns (2)

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

- cat
  - dog
  - mouse
  - elephant
- Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
  - Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

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This frame does not contain a (dedicated) frame title.



## Examples with uncovering

## Piecewise uncovering using pause

Paragraphs and items can be uncovered easily with `\pause`.

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- Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

## Piecewise uncovering using pause

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## Fine grained control

- First line

## Fine grained control

- First line
- Second line (appears after first line, disappears again)



## Fine grained control

- First line
- Third line (appears before first one)

## Fine grained control

- First line
- Third line (appears before firth one)
- Fourth line

## Fine grained control

- First line
- Fourth line
- Fifth line

## Fine grained control

- First line
- Fourth line
- Fifth line

Standard behavior with `\onslide` is to keep its place, even if not displayed.

## Fine grained control

- First line
- Fourth line
- Fifth line

Standard behavior with `\onslide` is to keep its place, even if not displayed.  
With `\only`, the element does not occupy place. This may lead to shifting other elements.

# Quellcode

## Example-Code: Hallo Welt!

```
#include <stdio.h>

void main (void) {
    printf("Hallo_Welt!\n");
}
```

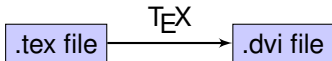
## TikZ example



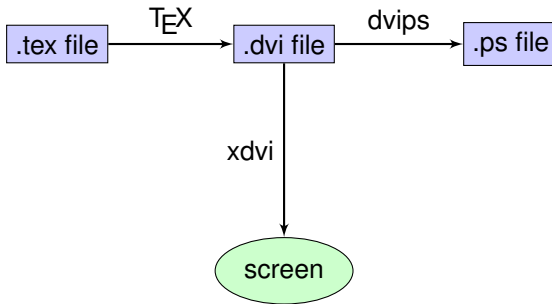
## animated graphics

.tex file

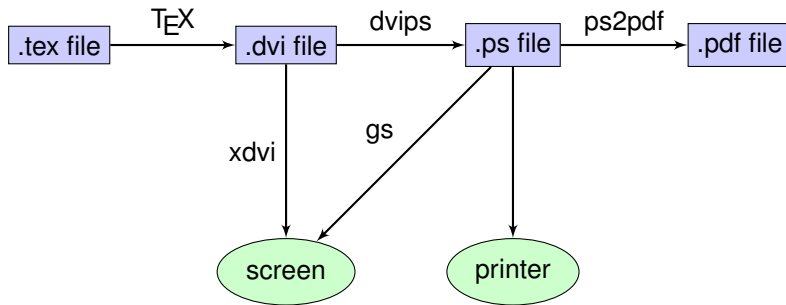
## animated graphics



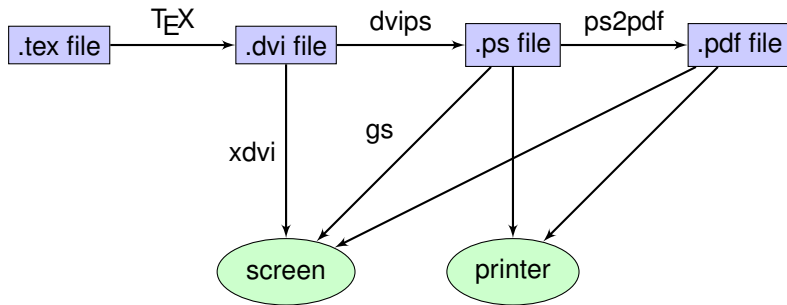
## animated graphics



## animated graphics



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