Deploying COOL on a Large Scale

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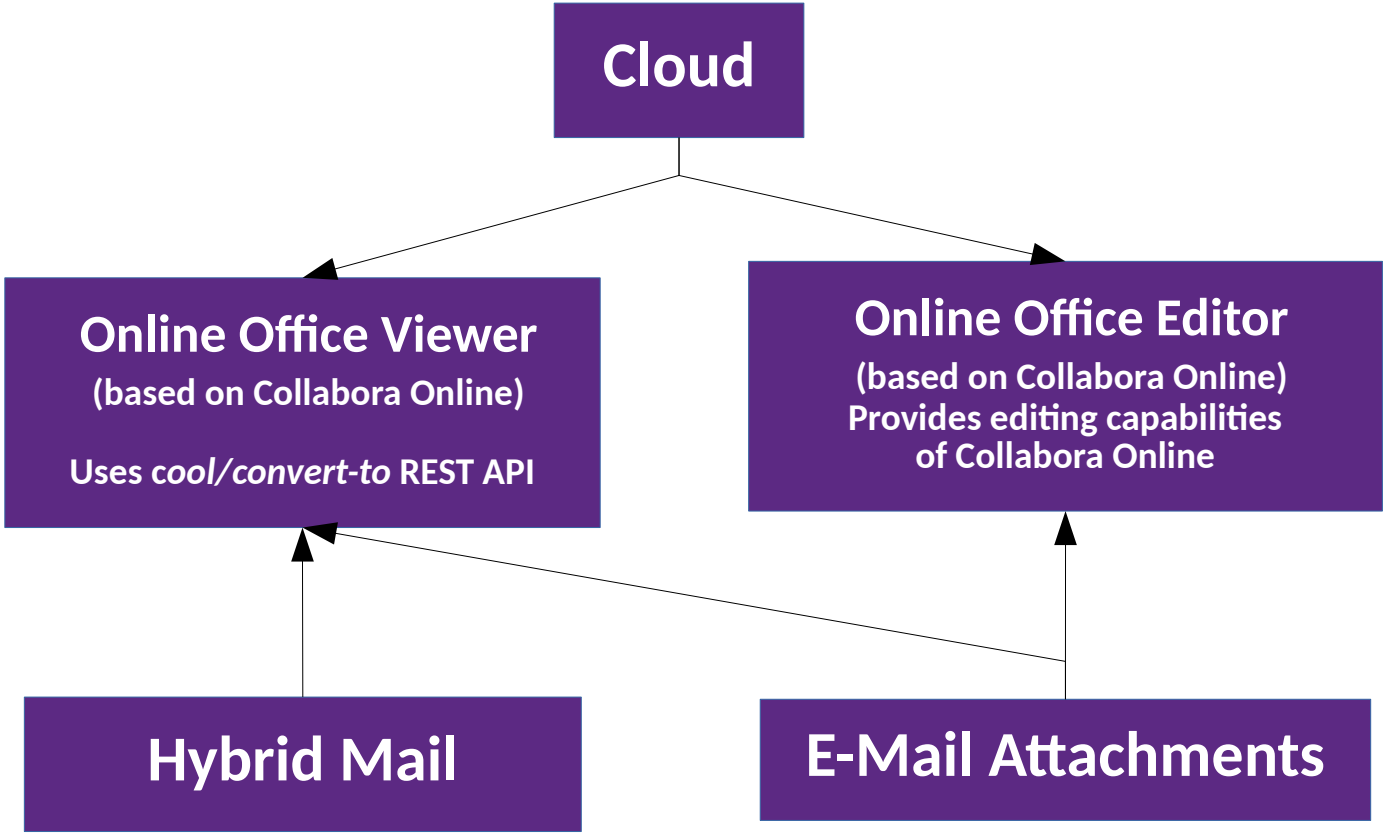
Collabora Online in 1&1'a ecosystem



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Scale of deployment

Type of deployment

- Kubernetes

Scale of deployment

- More than 50 pods for Editor
- More than 50 pods for Viewer
- 1 COOL instance / pod
- CPU: 2 cores / pod
- Memory: limit of 6GB / pod
- Editor
  - 600 documents edited at the same time
  - 35,000 documents edited / 24h
- Viewer
  - 600,000 conversions / 24h

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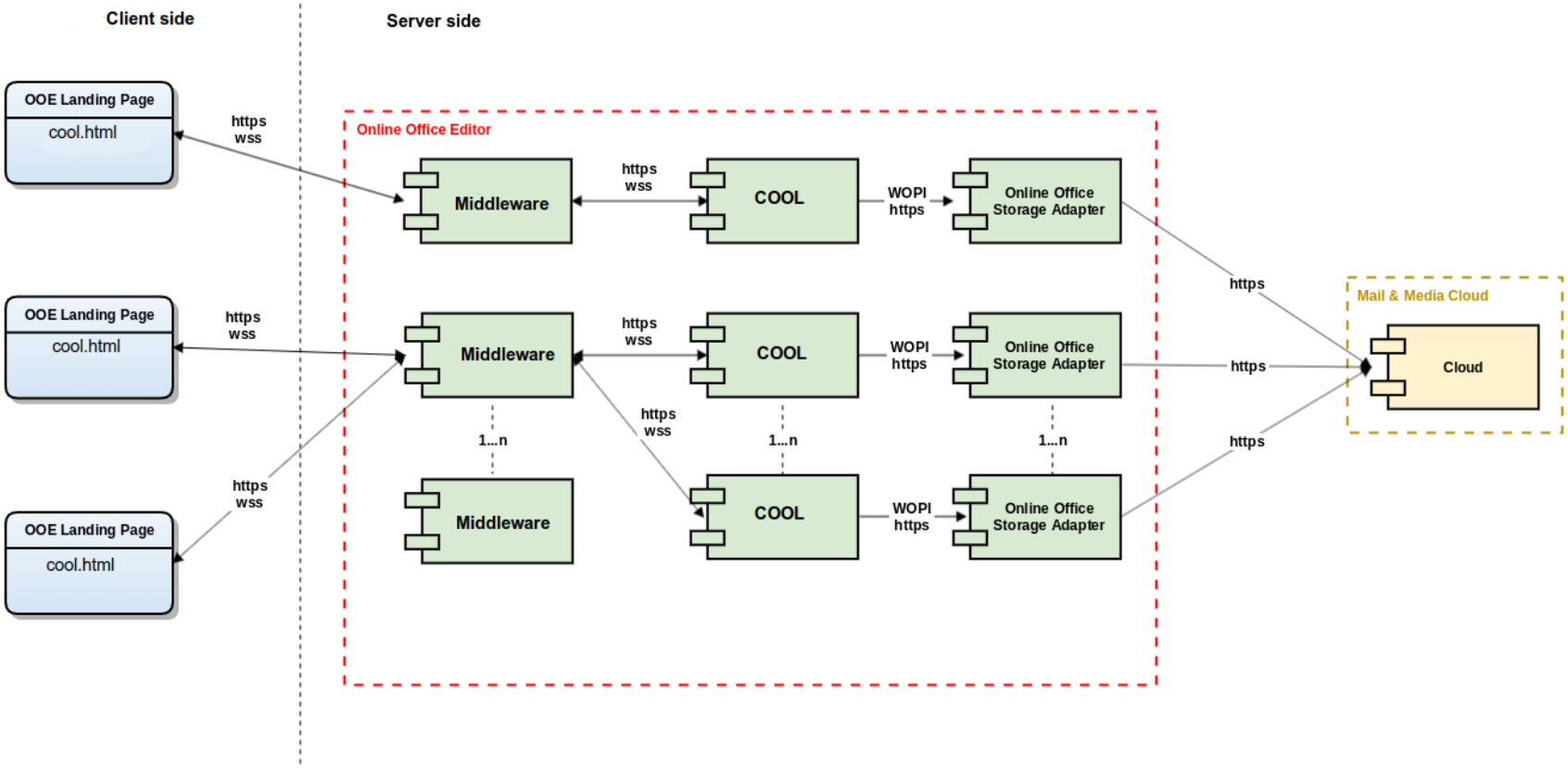
Online Office architecture



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1&1 contributions for large scale deployment

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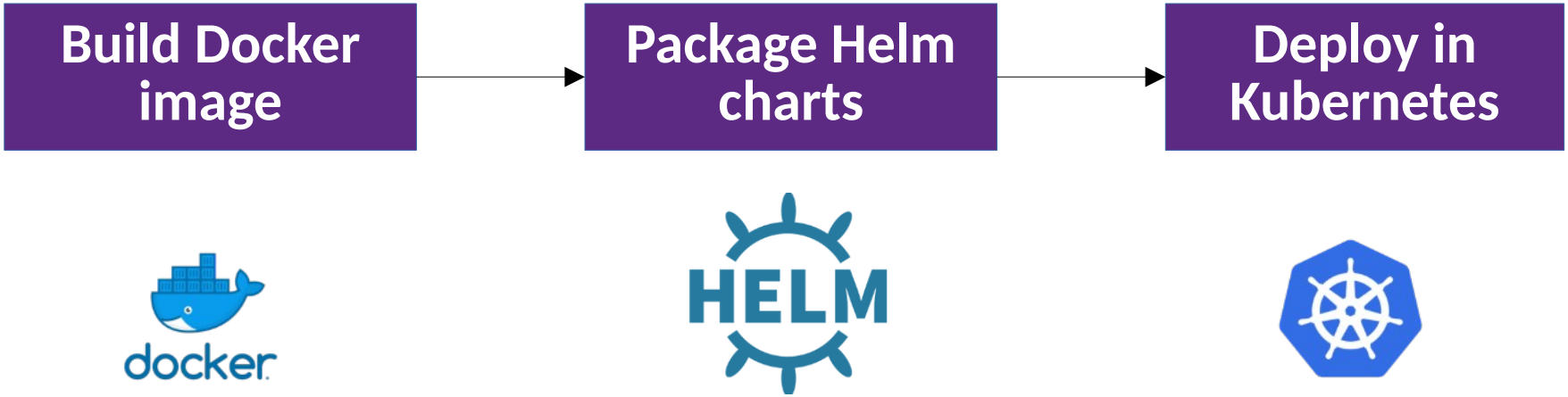
Basic support for Kubernetes



- Deploy using helm charts
- Reside in **kubernetes** folder
- Needs a proxy collaborative editing
- Thanks Pranam for expanding it

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REST endpoint for statistics

- /cool/getMetrics
- A simple Prometheus compatible format
- Values for total, min, max, average
- Statistics
  - Global
  - Coolwsd, Forkit, Kit processes
    - CPU
    - Memory
    - Threads
  - Document
    - Counting
    - Views
    - Network activity
    - Download/Upload duration
    - Load duration
    - Open duration
  - Errors
  - Cleanup statistics

```
kit_count 6
kit_unassigned_count 1
kit_assigned_count 5
kit_segfault_count 0
kit_lost_terminated_count 0
kit_thread_count_total 24
kit_thread_count_average 4
kit_thread_count_min 1
kit_thread_count_max 5
kit_memory_used_total_bytes 347574272
kit_memory_used_average_bytes 69514854
kit_memory_used_min_bytes 48406528
kit_memory_used_max_bytes 126287872
kit_cpu_time_total_seconds 27
kit_cpu_time_average_seconds 5
kit_cpu_time_min_seconds 2
kit_cpu_time_max_seconds 6

document_all_count 7
document_active_count 5
document_expired_count 2

document_resource_consuming_count 0
document_resource_consuming_abort_started_count 0
document_resource_consuming_aborted_count 0
```

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Automatic clean up of problematic kit processes

- A problematic kit process usually consumes an unusual amount of resources which could jeopardize an entire pod
- In a large deployment an automatic clean up of the problematic kit processes is need.
- Clean up of lost kit processes – a lost kit process is a process not referenced anymore by coolwsd.
  - Its useless and should not exist.
  - A clean up is needed.
- Clean up of resource consuming kit processes – a resource consuming kit process is a process that is still referenced by coolwsd, is in idle state for some time and consumes an unusual amount of resources.
- A dedicated presentation at COOL Days 2021 – Stability and cleanup improvements in Online

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Thank you

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