

Plans for the Web API

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OCR-D Phase 3 Kick-Off Workshop

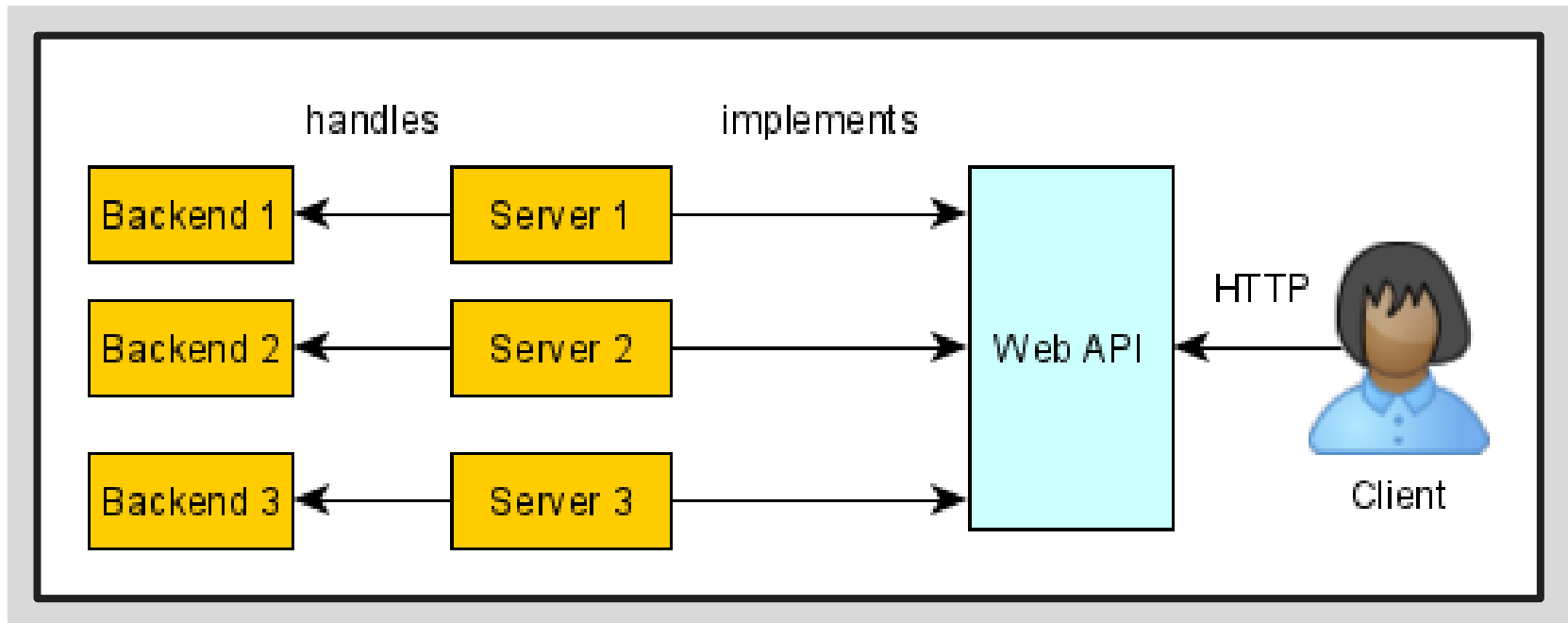
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Rationale

- Our focus on consistent command line interfaces has proven successful but we need networking for scale and ease-of-use
- We will have multiple implementations scenarios that will provide HTTP interfaces to their backends in OCR-D phase 3
- Having a common Web API for these different implementation projects will improve interoperability and reduce redundancy

What we mean by “Web API”

(“we” being the coordination project)



What we will provide

(based on community-wide discussion of course)

- OpenAPI definition of the HTTP interface
- Tooling for discovery, introspection, validation, etc.
- Possibly a reference implementation to make it easier to integrate a backend (think: core and spec)

What will the IP provide

- server that implements the Web API
- scenario-specific backend
- potentially additional endpoints for scenario-specific extensions (e.g. authentication, rationing, prioritizing...)

Overview of the draft API

- NOTE: This is a draft and still subject to change

The screenshot displays the SwaggerHub interface for the 'ocr-d_web_api' version 1.0.0. The interface is divided into three main sections:

- Left Panel (Info):** Lists API endpoints under 'discovery' and 'processing' categories. The 'discovery' endpoints include GET /processor, GET /processor/{executable}, POST /workflow, GET /workflow/{workflow-id}, and GET /discovery. The 'processing' endpoints include GET /processor, GET /processor/{executable}, POST /processor/{executable}, GET /processor/{executable}/{job-id}, GET /processor/{executable}/{job-id}/log, and POST /processor/{executable}/{job-id}/log.
- Center Panel (Code):** Shows the OpenAPI specification for the GET /processor endpoint. The code is as follows:

```
55 paths:
56   /processor:
57     get:
58       tags: ['processing', 'discovery']
59       operationId: listProcessors
60       responses:
61         '200':
62           description: List all processors
63           content:
64             application/json: {schema: {ref: '#/components
65                               /schemas/Processorlist'}}
66
67   /processor/{executable}:
68     get:
69       tags: ['processing', 'discovery']
70       operationId: getProcessor
71       parameters:
72         - name: executable
73           in: path
74           description: Name of the executable
75           schema: {ref: '#/components/schemas
76                 /OcrdExecutable'}
77       required: true
78       responses:
79         '200':
80           description: Get this processor
81           content:
82             application/json: {schema: {ref: '#/components
83                               /schemas/Processor'}}
84         '404': {content: {}, description: 'Processor not
85               available'}
86     post:
87       tags: ['processing']
88       operationId: runProcessor
89       parameters:
```
- Right Panel (Info):** Provides a high-level overview of the API. It includes the title 'OCR-D Web API', version '1.0.0', and OAS3 specification. It describes the API as an 'HTTP API for offering OCR-D processing' and states that the document defines the data model and various HTTP APIs. It also mentions OCR-D API compatibility requirements and lists media types such as application/json, application/vnd.ocrd+zip, and text/vnd.ocrd+sh.

Grouping functionality

- `discovery`: what processors are available, which parts of the API is implemented, what predefined workflows are available, terms of use, ...
- `workspace`: upload/register/list/retrieve workspaces

Grouping functionality (cnt'd)

- processor: list/call processors, list/manage processor jobs
- workflow: list/call workflows, list/manage workflow jobs
- training: training OCR engines, still unspecified
- acl: authentication, still unspecified

Web API and workflow/processing server

- a possible backend for a reference implementation

Web API and Processor CLI

- The processor group of endpoints should support most/all features of the processor CLI

Web API and workflow format

- The workflow group of endpoints should accept/send workflows in this format

Thank you 