

# Configuration reference

All settings of an instance live in `config.json` in the data folder (see [Installation and updates](#)). The API token is not part of it, it is stored encrypted in `secrets.json`. Normally you edit everything in the window under **Settings**. The file can also be edited in a text editor, the running engine picks up the change by itself.

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## How the configuration is handled

|                          |                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hot reload</b>        | The engine watches the file and applies changes without restart. A new URL, token or WebSocket setting triggers a reconnect, running print jobs finish. Exception: of the <code>logging</code> settings only <code>minimumLevel</code> applies immediately; retention, file size, event log and JSON file take effect after a restart. |
| <b>Validation</b>        | On load and before saving. The window shows errors per field. A headless start with an invalid file ends with exit code 1. An invalid change while the engine runs is not applied, the engine keeps the last valid configuration and writes event id 5000.                                                                             |
| <b>New keys</b>          | After an update the service adds keys of the new version with their defaults and writes the file (if it may). Unknown keys are reported in the log and removed on the next save.                                                                                                                                                       |
| <b>Change log</b>        | Every save is recorded with Windows account, time and changed keys in <code>state.db</code> . The diagnostic package contains the last 500 changes.                                                                                                                                                                                    |
| <b>Export and import</b> | <b>Settings → Import and export.</b> The export never contains the token. The import keeps name and id of the receiving instance, check and save afterwards. Useful to roll out one configuration to several sites.                                                                                                                    |
| <b>Write access</b>      | Saving needs write access to the data folder. Without it the window offers <b>Restart as administrator</b> .                                                                                                                                                                                                                           |

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# Example

```
{

  "instance": { "id": "5d0c2f4e-...", "name": "Warehouse North", "serviceAccount":
"SRV01\\svc-veloxprint"
},
  "api": { "baseUrl": "https://vf.example.com", "timeoutSeconds": 30, "allowUnencrypted":
false,
          "serverTimeZone": "Europe/Berlin"
},

},
  "websocket": { "scheme": "wss", "host": "vf.example.com", "port": 443, "appKey": "your-
reverb-app-key",
                "channel": "private-report-print-tasks"
},
                "paused": false, "pauseReason": null, "
                "retryBackoffSeconds": 30
},
  "printerDefaults": { "scaling": "ActualSize", "autoRotate": true, "dpi": null, "copiesMode":
"Driver", "paperSource": null, "duplex": "Default", "color": "Default" },

  [ { "queueName": "WH-LABEL-01", "localName": "\\printsrv01\\WH-LABEL-01", "dpi": 300 },
    { "queueName": "PDF24", "copiesMode": "ActualSize" }
],
  "logging": { "minimumLevel": "Information", "retentionDays": 30, "maxFileSizeMb": 250,
"eventLog": true, "jsonFile": false
},
    "statistics": { "retentionDays": 365, "resetAt": null
    "health": { "enabled": false, "port": 8080
    "ui": { "errorNotifications": true, "windowWidth": null, "windowHeight": null
```

```
"windowMaximized": false
}
```

## instance

| Key                         | Default      | Description                                                                                                    |
|-----------------------------|--------------|----------------------------------------------------------------------------------------------------------------|
| <code>id</code>             | new GUID     | Identifies the instance (mutex, stop signal). Never copy it to another instance, an import keeps the local id. |
| <code>name</code>           | machine name | Display name in the window, on the test page and in the diagnostic package                                     |
| <code>serviceAccount</code> | null         | Account of the scheduled task, written when the task is set up. Used for the file permissions.                 |

## api

| Key                           | Default         | Description                                                                                                                                                                           |
|-------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>baseUrl</code>          | empty, required | Base URL of VeloxFactory without <code>/api/v1</code> , e.g. <code>https://vf.example.com</code> . All endpoints are derived from it.                                                 |
| <code>timeoutSeconds</code>   | 30 (5 to 300)   | Timeout of a single API call                                                                                                                                                          |
| <code>allowUnencrypted</code> | false           | Allows <code>http://</code> and <code>ws://</code> . Without it both are rejected, because token and PDFs would travel unencrypted. The window shows a warning banner while it is on. |
| <code>serverTimeZone</code>   | Europe/Berlin   | Time zone of the VeloxFactory instance ( <code>APP_TIMEZONE</code> ). Audit timestamps of the API carry no offset, the lead time statistics need it.                                  |

The **API token** is entered in **Settings** → **Connection** and stored in `secrets.json`. Required rights: `global:use-api`, `report-print-task:read`, `report-print-task:update`, optional `printer:read`. The token never appears in logs, exports or diagnostic packages.

## receive

| Key                                    | Default         | Description                                                                                                                                                                                                                                 |
|----------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>mode</code>                      | Hybrid          | <code>Hybrid</code> , <code>WebSocket</code> or <code>Polling</code> , see <a href="#">Receiving and processing print tasks</a>                                                                                                             |
| <code>broadcastIds</code>              | <code>[]</code> | Broadcast ids this instance prints, exact match. At most 20, unique, no commas, no surrounding spaces, max. 255 characters. At least one is required unless <code>includeWithoutBroadcastId</code> is on.                                   |
| <code>includeWithoutBroadcastId</code> | false           | Also take tasks and printers without broadcast id. VeloxFactory sends no WebSocket event for such tasks, they arrive only by polling (in Hybrid after at most <code>safetyPollIntervalSeconds</code> ). Turn it on in one instance at most. |
| <code>pollingIntervalSeconds</code>    | 30 (min. 1)     | Poll interval in mode <code>Polling</code> , and in <code>Hybrid</code> while the WebSocket is down. Below 3 s the window warns: constant API calls, the rate limit is used up quickly.                                                     |
| <code>safetyPollIntervalSeconds</code> | 120 (min. 30)   | Safety poll in <code>Hybrid</code> while the WebSocket is subscribed                                                                                                                                                                        |
| <code>pageSize</code>                  | 10 (1 to 100)   | Tasks per poll page. Every page carries the PDFs, a small value keeps responses small. Further pages follow immediately.                                                                                                                    |

## websocket

Ignored in mode `Polling`. The URL is built as `{scheme}://{host}:{port}/app/{appKey}?protocol=7&client=veloxprint&version={x}`.

| Key                  | Default                    | Description                                                                                         |
|----------------------|----------------------------|-----------------------------------------------------------------------------------------------------|
| <code>scheme</code>  | wss                        | <code>wss</code> or <code>ws</code> ( <code>ws</code> only with <code>api.allowUnencrypted</code> ) |
| <code>host</code>    | empty, required            | Host of the Reverb server as reachable from the printer machine ( <code>REVERB_HOST</code> )        |
| <code>port</code>    | 443                        | Port of the Reverb server ( <code>REVERB_PORT</code> , behind a reverse proxy usually 443)          |
| <code>appKey</code>  | jasper-who                 | <code>REVERB_APP_KEY</code> of your VeloxFactory instance                                           |
| <code>channel</code> | private-report-print-tasks | Private channel of the print task events. Must start with <code>private-</code> . Keep the default. |

## processing

| Key                                                                       | Default           | Description                                                                                                             |
|---------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------|
| <code>paused</code> , <code>pauseReason</code> , <code>pausedUntil</code> | false, null, null | Maintenance pause. With <code>pausedUntil</code> (ISO 8601 with offset) the pause ends by itself. Survives a restart.   |
| <code>maxParallelJobs</code>                                              | 4 (1 to 32)       | Tasks processed at the same time                                                                                        |
| <code>serializePerPrinter</code>                                          | true              | One job per printer at a time, in the order of the task ids                                                             |
| <code>retryCount</code>                                                   | 3 (0 to 10)       | Local retries on transient errors (printer offline, paper out, spooler refused the job)                                 |
| <code>retryBackoffSeconds</code>                                          | [5, 30, 120]      | Wait before retry 1, 2, 3 and so on (1 to 3600 each). With more retries than values the last value repeats.             |
| <code>printTimeoutSeconds</code>                                          | 120 (10 to 3600)  | Limit for a print call and for the spooler wait of <code>Completed</code> . A driver that waits for a dialog ends here. |

| Key                       | Default | Description                                                                                                                                                                      |
|---------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>confirmation</code> | Spooled | <code>Spooled</code> : confirm after handing the job to the Windows spooler.<br><code>Completed</code> : wait until the spooler job has finished. Can be overridden per printer. |
| <code>dryRunFolder</code> | null    | Absolute local or UNC path. When set, PDFs are written there instead of printed and not confirmed. Empty = print normally.                                                       |

## printerDefaults and printers

`printerDefaults` applies to every printer. An entry in `printers` overrides single values for one queue name; a value missing there (or `null`) falls back to the default. Details and advice in [Printers and printing](#).

| Key                     | Default                                  | Description                                                                                                                                                             |
|-------------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>queueName</code>  | only in <code>printers</code> , required | Printer name as the print task carries it ( <code>printerName</code> of the VeloxFactory printer). Unique, case-insensitive.                                            |
| <code>localName</code>  | only in <code>printers</code>            | Alias: Windows printer that receives the jobs of this queue name. Empty = same name.                                                                                    |
| <code>scaling</code>    | ActualSize                               | <code>ActualSize</code> (1:1 from the paper corner) or <code>FitToPage</code> (scaled into the printable area, centred)                                                 |
| <code>autoRotate</code> | true                                     | Rotates a page when its orientation differs from the paper                                                                                                              |
| <code>dpi</code>        | null (72 to 1200)                        | Output resolution of the driver. Takes effect only if the driver offers exactly this resolution, otherwise the driver default stays. Empty = driver default.            |
| <code>copiesMode</code> | Driver                                   | <code>Driver</code> : one spooler job with n copies. <code>Loop</code> : one job per copy, for drivers that ignore the copy count (e.g. PDF24, Microsoft Print to PDF). |

| Key                       | Default                       | Description                                                                                                |
|---------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------|
| <code>paperSource</code>  | null                          | Tray by name as the driver lists it. Unknown names keep the default tray.                                  |
| <code>duplex</code>       | Default                       | <code>Default</code> , <code>Simplex</code> , <code>Vertical</code> , <code>Horizontal</code>              |
| <code>color</code>        | Default                       | <code>Default</code> , <code>Color</code> , <code>Monochrome</code> (only on printers that support colour) |
| <code>confirmation</code> | only in <code>printers</code> | Overrides <code>processing.confirmation</code> for this printer                                            |

## logging, statistics, health, ui

| Key                                                    | Default                     | Description                                                                                                                                                                                                                          |
|--------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>logging.minimumLevel</code>                      | Information                 | <code>Verbose</code> , <code>Debug</code> , <code>Information</code> , <code>Warning</code> , <code>Error</code> , <code>Fatal</code> . <code>Debug</code> shows WebSocket protocol details (ping, pong, auth). Applies immediately. |
| <code>logging.retentionDays</code>                     | 30 (1 to 3650)              | Log files older than this are deleted. Takes effect after a restart.                                                                                                                                                                 |
| <code>logging.maxFileSizeMb</code>                     | 250 (1 to 10240)            | Size limit per log file; a day beyond it continues in <code>_001</code> , <code>_002</code> . Takes effect after a restart.                                                                                                          |
| <code>logging.eventLog</code>                          | true                        | Warnings and errors to the Windows event log (needs the event source, created with the scheduled task). Takes effect after a restart.                                                                                                |
| <code>logging.jsonFile</code>                          | false                       | Additional log in compact JSON ( <code>veloxprint-*.json</code> ) for log collectors. Takes effect after a restart.                                                                                                                  |
| <code>statistics.retentionDays</code>                  | 365 (30 to 3650)            | How long statistics are kept                                                                                                                                                                                                         |
| <code>statistics.resetAt</code>                        | null                        | Set by <b>Reset statistics</b> . Jobs before this time no longer count.                                                                                                                                                              |
| <code>health.enabled</code> , <code>health.port</code> | false, 8765 (1024 to 65535) | Local health endpoint <code>http://localhost:{port}/health</code> , see <a href="#">Monitoring and troubleshooting</a>                                                                                                               |
| <code>ui.errorNotifications</code>                     | true                        | Windows notification of the tray icon on print errors                                                                                                                                                                                |

| Key                                                                                       | Default           | Description                                    |
|-------------------------------------------------------------------------------------------|-------------------|------------------------------------------------|
| <code>ui.windowWidth</code> , <code>windowHeight</code> ,<br><code>windowMaximized</code> | null, null, false | Last window size, written by the window itself |

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