

# LabCollector / LSM API v2

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## 1. Available methods in LSM web service

### 1.1. GET

#### 1.1.1. Jobs

- Method: GET
- URL: [http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2)
- Optional search parameters:
  - datefrom
  - dateto
  - jobid (id or barcode)
  - sampleid (id or barcode)
  - assayid
  - status (by default only jobs in progress are returned, use status=all for view all jobs)
  - samplename
  - samplestatus
  - samplestatusdatefrom
  - samplestatusdateto
  - assaystatus
  - assaystatusdatefrom
  - assaystatusdateto
  - startedon
  - completedon
  - validatedon
  - batch
  - jobstatus
  - jobnumber
- Additional parameters:
  - parameterid & parametervalue to search by job parameter, sample parameter or assay parameter
  - searchmode: when searching by jobnumber, samplename or batch: searchmode indicates the mode (startswith, endswith, contains, strict-default-)
  - samplesearch: searches by barcode (S+ID or Sample name), regarding the barcode option set in `lsm>admin>setup>job and samples naming`. The search is strict and supports multiple values separated by comma
  - limit: to limit number of results add `limit=N`, being N the max number of jobs
  - return: by default the tags returned are `<job>`, `<sample>`, `<assay>` and `<parameter>`. Omit tags or select other tags as sample report in base64 and requester uses and managers is possible using the parameter return. The list of options for this parameter is `return=job,sample,assay,parameter,samplereport,user,manager`

#### 1.1.2. Equipments

- Method: GET
- URL:  
[http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2&getEquipmentList=1](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&getEquipmentList=1)
- Optional parameters: id

#### 1.1.3. Assays

- Method: GET
- URL: [http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2&getAssayList=1](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&getAssayList=1)

- Optional parameters: id

#### 1.1.4. Categories

- Method: GET
- URL:  
[http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2&getCategoryList=1](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&getCategoryList=1)
- Optional parameters: id

#### 1.1.5. Sample Types

- Method: GET
- URL:  
[http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2&getSampleTypeList=1](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&getSampleTypeList=1)
- Optional parameters: id

#### 1.1.6. Parameters

- Method: GET
- URL:  
[http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2&getParameterList=1](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&getParameterList=1)
- Optional parameters: id, level (level=J returns job parameters, level=S returns sample parameters and level=A returns test parameters)

#### 1.1.7. Requesters

- Method: GET
- URL:  
[http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2&getRequesterList=1](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&getRequesterList=1)
- Optional parameters: id, categoryid

#### 1.1.8. Invoices

- Method: GET
- URL: [http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2&getInvoiceList=1](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&getInvoiceList=1)
- Optional parameters: id, datefrom, dateto, status, format (CSV | IIF), jobid, jobnumber

#### 1.1.9. Batches

- Method: GET
- URL: [http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2&getBatchList=1](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&getBatchList=1)
- Optional parameters: batch, status (notfinished –default– | all | assigned | started | completed | approved )

#### 1.1.10. Token

- Method: GET

- URL: `http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&getToken`
- Required parameters: jobid or sampleid

### 1.1.11. Send token by email

- Method: GET
- URL: `http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&sendToken`
- Required parameters: jobid or sampleid

### 1.1.12. Send results to external sources

- Method: GET
- URL: `http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2&sendResults`
- Required parameters: jobid

*Note: Send results back to external source only if the job have been created using our integration API (PWNHealth, 1Health, ORDRS, LabSoft)*

## 1.2. POST

### 1.2.1. Create requesters

- Method: POST
- URL: `http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2`
- Required parameter: create
- Example of *create*:

```
<requesters>
  <requester code='R01' name='Requester from API' taxNumber='12346789'>
    <billing address='One street' city='City' state='State' country='US' zip='99999'
phone='555123123' fax='555123123' contactFirstName='Jane' contactLastName='Doe'
contactEmail='jane@gmail.com' ></billing>
    <shipping address='One street' city='City' state='State' country='US' zip='99999'
phone='555123123' fax='555123123' contactFirstName='Jane' contactLastName='Doe'
contactEmail='jane@gmail.com' ></shipping>
  </requester>
</requesters>
```

### 1.2.2. Create job

- Method: POST
- URL: `http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2`
- Required parameter: create
- Optional parameter: notoken (if is set option the token is not sent on job creation, although the automatic token is ON)
- Example of *create*:

```
<jobs>
  <job number='job-api-006' requester='21' project="109">
    <parameter id='242' value='text'></parameter>
    <sample name='job-api-006-sample1' type='1' comment='notes1'>
      <parameter id='247' value='Female'></parameter>
      <assay id='1'></assay>
      <assay id='2'></assay>
    </sample>
  </job>
</jobs>
```

```

    </sample>
    <sample name='job-api-006-sample2' type='1' comment='notes2'>
      <parameter id='247' value='Male'></parameter>
      <assay id='1'></assay>
      <assay id='2'></assay>
    </sample>
  </job>
  <job number='job-api-007' requester='21' project="Test new project code">
    <parameter id='242' value='text'></parameter>
    <sample name='job-api-007-sample1' type='1' comment='notes1'>
      <parameter id='247' value='Female'></parameter>
      <assay id='1'></assay>
      <assay id='2'></assay>
    </sample>
    <sample name='job-api-007-sample2' type='1' comment='notes2'>
      <parameter id='247' value='Male'></parameter>
      <assay id='1'></assay>
      <assay id='2'></assay>
    </sample>
  </job>
</jobs>

```

Multiple jobs and multiple samples are allowed.  
 Attribute Requester supports id or text.  
 Attribute project supports id or text.

### 1.2.3. Append samples to existent job

Use the same notation of 1.2.2 Create job adding an extra parameter *appendsamplesifjobexist* = 1.

JobNumber must match and be unique. If the job doesn't exist a new job will be created. If job exists but is already completed it returns an error message.

### 1.2.4. Save results

- Method: POST
- URL: [http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/websevice/index.php?v=2](http://[my_labcollector_url]/extra_modules/lsm/websevice/index.php?v=2)
- Required parameter: result
- Example of *result*: `<assays><assay uniqueid="1223"><result><parameter id="34" unit="mg" value="123"/><parameter id="35" unit="ml" value="456"/></result></assay></assays>`

## 1.3. PUT

### 1.3.1. Upload files

- Method: PUT
- URL: [http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/websevice/index.php?v=2](http://[my_labcollector_url]/extra_modules/lsm/websevice/index.php?v=2)
- Parameters:
  - upload (required)
  - file (required)
  - uniqueid (required): identifier of job-sample-assay
  - parameter (optional): supports parameter id or parameter name
- Response: OK 200

### 1.3.2. Link sample to module

- Method: PUT
- URL: [http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2)
- Parameters:
  - sampleid (required): identifier of sample (sampleid or barcode). Supports multiple ids separated by commaOR
  - samplename (required): sample name
  - module (required): module name or short name
  - recordid (required): identifier of record in module
- Response: OK 200

### 1.3.3. Update sample

- Method: PUT
- URL: [http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2)
- Parameters:
  - sampleid (required): identifier of sample (sample id or barcode). Supports multiple ids separated by commaOR
  - samplename (required): sample name
  - shipmentstatus(optional): Use 0 Submitted, 1 In transit, 2 Received, 3 Returned (supports number of label)
  - name (optional): new sample name
  - type (optional): new sample type
  - batch (optional): batch to be assigned to tests
  - Any sample parameter using parameter label or parameter id

### 1.3.4. Update sample status

- Method: PUT
- URL: [http://\[my\\_labcollector\\_url\]/extra\\_modules/lsm/webservice/index.php?v=2](http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2)
- Parameters:
  - sampleid (required): identifier of sample (sampleid or barcode). Supports multiple ids separated by commaOR
  - samplename (required): sample name
  - status (optional): started | completed | approved
  - startedby (optional): valid User ID in LSM. If status is set to 'started' and this parameter is not received, the default operator selected in API settings will be used instead
  - startedon (optional): datetime (YYYY-MM-DD hh:mm:ss). If status is set to 'started' or 'startedby' is set, and this parameter is not received, current date will be used
  - completedby (optional): valid User ID in LSM. If status is set to 'completed' and this parameter is not received, the default operator selected in API settings will be used instead
  - completedon (optional): datetime (YYYY-MM-DD hh:mm:ss). ). If status is set to 'started' or 'startedby' is set and this parameter is not received, current date will be used
  - validatedby (optional): valid User ID in LSM. If status is set to 'approved' and this parameter is not received, the default operator selected in API settings will be used instead

- validatedon (optional): datetime (YYYY-MM-DD hh:mm:ss). If status is set to 'approved' or 'validatedby' is set and this parameter is not received, current date will be used
  - assayid (optional): if it is set, the update is applied only to this assay
- Response: OK 200

*Note: startedby, completedby and validatedby also accepts LabCollector Contact ID if it is preceded by 'LC', example: LC58*

### 1.3.5. Start a batch

- Method: PUT
- URL: `http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2`
- Parameters:
  - batch (required): batch name
  - startedby (optional): user id valid in LSM (or 1 for super admin).
  - startedon (optional): if not set, current date is used

*Note: startedby also accepts LabCollector Contact ID if it is preceded by 'LC', example: LC58*

### 1.3.6. Update job

- Method: PUT
- URL: `http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2`
- Parameters:
  - jobid (required): identifier of job (job id or barcode). Supports multiple ids separated by comma
  - Any job parameter using parameter label or parameter id

### 1.3.7. Accept/Reject a job

- Method: PUT
- URL: `http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2`
- Parameters:
  - jobid (required): identifier of job (job id or barcode). Supports multiple ids separated by comma
  - acceptance (required): accept | reject | hold
  - comment (optional): a text comment to the acceptance/rejection
  - sendnotification (optional): 0 | 1 (send notification by email)

### 1.3.8. Order a job quoted

- Method: PUT
- URL: `http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2`
- Parameters:
  - jobid (required): identifier of job (job id or barcode). Supports multiple ids separated by comma



- order (required): 1
- purchase order (optional): purchase order

### 1.3.9. Update requester

- Method: PUT
- URL: `http://[my_labcollector_url]/extra_modules/lsm/webservice/index.php?v=2`
- Parameters:
  - requesterid (required): identifier of requester (requester id or code or name)
  - any requester field (optional): code, name, taxNumber, discount, company, prefix, registrationid, onPortal, reportPassword, category
  - any requester billing field (optional): billing.address, billing.city, billing.state, billing.country, billing.zip, billing.phone, billing.fax, billing.contactFirstName, billing.contactLastName, billing.contactEmail
  - any requester shipping field (optional): shipping.address, shipping.city, shipping.state, shipping.country, shipping.zip, shipping.phone, shipping.fax, shipping.contactFirstName, shipping.contactLastName, shipping.contactEmail

## 2. Authentication

One HEADER parameter is mandatory:

-Key: X-LC-APP-Auth

-Value: The token you can view/generate in LabCollector -> Admin -> Others -> Setup -> Web services API

## 3. Tool

You can try to retrieve data from or send data to the API with some software app as Postman (<https://www.getpostman.com/>).

## 4. Screenshots

### 4.1. GET

#### 4.1.1. Get list of jobs in progress

GET  Send Save

Params  Authorization Headers (11) Body  Pre-request Script Tests Settings Cookies

Query Params

	KEY	VALUE	DESCRIPTION	...	Bu
<input checked="" type="checkbox"/>	v	2			
	Key	Value	Description		

Body Cookies (1) Headers (7) Test Results Status: 200 OK Time: 384ms Size: 106.74 KB Save Respor

Pretty Raw Preview Visualize XML

```

1 <jobs>
2   <job id='491' name='20200109-003' barcode='J491' date='2020-01-09' status='In progress' requester='22' requestername='Claire
3     Requester' user='1' username='Super Administrator'>
4     <parameter id='242' value='1'></parameter>
5   </job>
6   <job id='488' name='20200106-002' barcode='J488' date='2020-01-06' status='In progress' requester='29'
7     requestername='ghRequest3' user='1' username='Super Administrator'>
8     <parameter id='4' value='test'></parameter>
9     <parameter id='8' value=''></parameter>

```

#### 4.1.2. Get list of samples received in a period

GET  Send Save

Params  Authorization Headers (10) Body  Pre-request Script Tests Settings Cookies

Query Params

	KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/>	v	2	
<input checked="" type="checkbox"/>	status	all	
<input checked="" type="checkbox"/>	samplestatus	Received	
<input checked="" type="checkbox"/>	samplestatusdatefrom	2019-10-08	
<input checked="" type="checkbox"/>	samplestatusdateto	2019-10-10	
	Key	Value	Description

Body Cookies (1) Headers (7) Test Results Status: 200 OK Time: 208ms Si

Pretty Raw Preview Visualize XML

```

24 <sample id='1291' name='GH-1570606628501' barcode='S1291' comment='' lc_link='' status='Received' statusdate='2019-10-09 09:59:39'>

```

### 4.1.3. Get list of requesters

GET `http://localhost/lab/extra_modules/lsm/webservice/index.php?v=2&getRequesterList=1`

Authorization Headers (3) Body Pre-request Script Tests

Key	Value	Description
<input checked="" type="checkbox"/> X-LC-APP-Auth	8ab3f3d1287ac10a059869f8b4660099741223398c9aa055eb5e96...	
<input checked="" type="checkbox"/> Accept	text/xml	
<input checked="" type="checkbox"/> X-LC-APP-Charset	ISO 8859-1	
New key	Value	Description

Body Cookies Headers (7) Tests

Pretty Raw Preview XML `<>`

```

1 <requesters>
2 <requester id='1' code='' name='Req1' taxNumber=''>

```

### 4.1.4. Get token

GET `http://localhost/labcollector-6.0/extra_modules/lsm/webservice/index.php?v=2&getToken&jobid=118`

Params Authorization Headers (8) Body Pre-request Script Tests Settings

Headers `<>` 7 hidden

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> X-LC-APP-Auth	4694eaa154900b300d82e87bfe5df88d722daa6151...	

Body Cookies (1) Headers (8) Test Results 🌐 Status: 200 OK Time: 68 ms

Pretty Raw Preview Visualize XML `<>`

```

1 76AE15EA

```

### 4.1.5. Send token by email

GET `http://localhost/labcollector-6.0/extra_modules/lsm/webservice/index.php?v=2&sendToken&jobid=118`

Params Authorization Headers (8) Body Pre-request Script Tests Settings

Headers `<>` 7 hidden

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> X-LC-APP-Auth	4694eaa154900b300d82e87bfe5df88d722daa6151...	

Body Cookies (1) Headers (8) Test Results 🌐 Status: 200 OK Time: 602 ms

Pretty Raw Preview Visualize XML `<>`

```

1 OK

```

## 4.2. POST

### 4.2.1. Create jobs


POST ▼ http://dev.agilebio.com/neosoft5421/extra\_modules/lsm/webservice/index.php?v=2

Params ● Authorization Headers (11) **Body** ● Pre-request Script Tests Settings

● none ● form-data ● x-www-form-urlencoded ● raw ● binary ● GraphQL

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> create	<jobs> <job number='job-api-006' requester='21' project='109'> <parameter id='242' value='text'></parameter> <sample name='job-api-006-sample1' type='1' comment='notes1'> <parameter id='247' value='Female'></parameter> <assay id='1'></assay> <assay id='2'></assay> </sample> <sample name='job-api-006-sample2' type='1' comment='notes2'> <parameter id='247' value='Male'></parameter> <assay id='1'></assay> <assay id='2'></assay> </sample> </job> </jobs>	Description Status: 200 OK Time: 199ms
Key		

Body Cookies (1) Headers (7) Test Results

Pretty Raw Preview Visualize XML ▼ 

1 513

### 4.2.2. Append samples to job


POST ▼ http://localhost/labcollector-5.5/extra\_modules/lsm/webservice/index.php?v=2

Params ● Authorization Headers (13) **Body** ● Pre-request Script Tests Settings

● none ● form-data ● x-www-form-urlencoded ● raw ● binary ● GraphQL

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> create	<jobs> - ...	
<input checked="" type="checkbox"/> appendsamplesifjobexist	1	
Key	Value	Description

Body Cookies (1) Headers (12) Test Results 🌐 Status: 200 OK

Pretty Raw Preview Visualize XML ▼ 

1 100



### 4.3.2. Update sample using name


PUT ▼ http://dev.agilebio.com/neosoft5421/extra\_modules/lsm/webservice/index.php?v=2

Params ● Authorization Headers (11) **Body** ● Pre-request Script Tests Settings

none  form-data  x-www-form-urlencoded  raw  binary  GraphQL

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> samplename	pr000120200204-001-010	
<input checked="" type="checkbox"/> shipmentstatus	Received	
Key	Value	Description

Body Cookies (1) Headers (7) Test Results Status: 200 OK Time: 141ms

Pretty Raw Preview Visualize XML ▼ 

1 OK

### 4.3.3. Update sample status


PUT ▼ http://[redacted]/extra\_modules/lsm/webservice/index.php?v=2

Params ● Authorization Headers (13) **Body** ● Pre-request Script Tests Settings

none  form-data  x-www-form-urlencoded  raw  binary  GraphQL

KEY	VALUE
<input checked="" type="checkbox"/> sampleid	56
<input checked="" type="checkbox"/> status	completed
<input checked="" type="checkbox"/> completedby	2
Key	Value

Body Cookies (1) Headers (11) Test Results

Pretty Raw Preview Visualize XML ▼ 

1 OK

### 4.3.4. Update requester


PUT ▼ http://[redacted]/extra\_modules/lsm/webservice/index.php?v=2

Params ● Authorization Headers (13) **Body** ● Pre-request Script Tests Settings

none  form-data  x-www-form-urlencoded  raw  binary  GraphQL

<input checked="" type="checkbox"/> requesterid	52	
<input checked="" type="checkbox"/> taxNumber	1234	
<input checked="" type="checkbox"/> billing.address	rue 12	
<input checked="" type="checkbox"/> shipping.fax	9999	
<input checked="" type="checkbox"/> shipping.country	Spain	
Key	Value	Description

Body Cookies (1) Headers (8) Test Results 🌐 200 OK 83 ms 270 B

Pretty Raw Preview Visualize XML ▼ 

1 OK