

1 Integrate for ArcGIS

REST API Guide

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1Integrate for ArcGIS REST API

The 1Integrate for ArcGIS REST API provides a simple integration point for 1Integrate for ArcGIS, through which rules and actions can be executed.

The API is installed as part of every 1Integrate for ArcGIS installation.



Note: This document assumes knowledge of 1Integrate for ArcGIS concepts; the concepts and capabilities are not described in detail within this document. For more information see the [1Integrate for ArcGIS WebHelp](#).

Supported HTTP Methods

The 1Integrate for ArcGIS REST API Supports GET or POST requests; there is no functional difference between the two.

While this does not strictly follow the RESTful approach to HTTP operation syntax, it does follow the standard ArcGIS Server REST API approach.

GET and POST requests can both specify request parameters in the URL as a query string. Alternatively, POST requests can set the `Content-Type` header to `application/x-www-form-urlencoded`, and send the query string in the body.

The response format is not determined by the `Accept` header, but by the `f` query parameter.

Notation

Within this document, the following colour-coding is used to demonstrate API requests and responses:

Green boxes represent example requests

Purple boxes represent example responses

2 Basic Operations

Data Validation (validate)

Description

Validate a region using a ruleset.

This will start the process of validation but because this could be a long running process then it is an asynchronous request that does not wait for the process to finish.



It returns a set of URLs that can be accessed to find out about the status, summary results and detailed results about the job result.

URL

`http://<arcgisServerHost>/arcgis/rest/services/<mapServiceName>/MapServer/exts/1IntegrateForArcGIS/validate`

Parameters

Parameter	Required / Optional	Format / Values	Description
f	Optional	<ul style="list-style-type: none">▶ html (default)▶ json▶ pjson	The response format.
apiVersion	Required		Version of this endpoint (e.g. 1.0)

Parameter	Required / Optional	Format / Values	Description
token	Optional <i>(Required if map service is secured, or server is federated)</i>		<p>The ArcGIS Server token if the map service is secured, or the ArcGIS Portal token if ArcGIS Server is federated.</p> <p>Ideally, this token should last longer than the duration of the job.</p> <div>  Note: Importing features requires a token to access the Feature Service. If the token expires while feature import is still happening, some features will not be imported. </div>
ruleset	Required		The name of the ruleset to use (e.g. MapRoad).
region	Optional		<p>The ESRI JSON polygon defining the extent of the job (e.g. <code>{"rings" : [[[0,0], [0,10], [10,10], [10,0], [0,0]]]}</code>).</p> <p>Defaults to the full extent of the data.</p> <div>  Note: This can be a multi-part polygon, or a polygon with holes. Geometries with heights are not supported. </div>

Request

GET

```
GET
http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/validate?f=json&apiVersion=1.0&ruleset=MapRoad&region=%7B%22type%22%3A%22Polygon%22%2C%22%3A%5B%5B%5B10.0%2C0.0%5D%2C%5B20.0%2C0.0%5D%2C%5B20.0%2C10.0%5D%2C%5B10.0%2C10.0%5D%2C%5B10.0%2C0.0%5D%5D%5D%7D
```

POST

```
POST
http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/validate
```

With Content-Type header application/x-www-form-urlencoded and the following body:

```
f=json&apiVersion=1.0&ruleset=MapRoad&region={
  "type": "Polygon",
  "coordinates": [[
    [10.0, 0.0],
    [20.0, 0.0],
    [20.0, 10.0],
    [10.0, 10.0],
    [10.0, 0.0]
  ]]
}
```

Response



Note: The jobDetailedReport endpoint is not yet implemented. Calling the jobDetailedReport URL will result in an empty string being returned.

Syntax

```
{
  "jobId": "<jobId>", // jobId is a GUID
  "statusUrl": "<url1>",
  "summaryReportUrl": "<url2>",
  "detailedReportUrl": "<url3>",
  "success": <true | false>,
  "apiVersion": "<api_version>"
}
```

Example

```
{
  "jobId": "c136a3c0-ef19-46e1-b0f5-2823d4bfb88d",
  "statusUrl":
"http://sampleserver/arcgis/rest/services/MyService/Map
```

```
Server/exts/1IntegrateForArcGIS/jobStatus?f=json&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-2823d4bfb88d",
    "summaryReportUrl":
    "http://sampleserver/arcgis/rest/services/MyService/Map
Server/exts/1IntegrateForArcGIS/jobSummaryReport?f=json
&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-
2823d4bfb88d",
    "detailedReportUrl":
    "http://sampleserver/arcgis/rest/services/MyService/Map
Server/exts/1IntegrateForArcGIS/jobDetailedReport?f=jso
n&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-
2823d4bfb88d",
    "success": true,
    "apiVersion": "1.0"
}
```


Data Enhancement (enhance)

Description

Enhance a region using a ruleset.


This will start the process of validation but because this could be a long running process then it is an asynchronous request that does not wait for the process to finish.


It returns a set of URLs that can be accessed to find out about the status, summary results and detailed results about the job result.

URL

`http://<arcgisServerHost>/arcgis/rest/services/<mapServiceName>/MapServer/exts/1IntegrateForArcGIS/enhance`

Parameters

Parameter	Required / Optional	Format / Values	Description
f	Optional	<ul style="list-style-type: none"> ▶ html (default) ▶ json ▶ pjson 	The response format.
apiVersion	Required		Version of this endpoint (e.g. 1.0)
token	Optional <i>(Required if map service is secured, or server is federated)</i>		<p>The ArcGIS Server token if the map service is secured, or the ArcGIS Portal token if ArcGIS Server is federated.</p> <p>This token <i>must</i> last longer than the duration of the job.</p> <div>  Note: An error will occur if the token does not last longer than the duration of the job, as the token is required to access the secured Feature Services to write updated/new features. </div>

Parameter	Required / Optional	Format / Values	Description
ruleset	Required		The name of the ruleset to use (e.g. <code>MapRoad</code>).
region	Optional		<p>The ESRI JSON polygon defining the extent of the job (e.g. <code>{"rings" : [[[0,0], [0,10], [10,10], [10,0], [0,0]]]}</code>).</p> <p>Defaults to the full extent of the data.</p> <div>  Note: This can be a multi-part polygon, or a polygon with holes. Geometries with heights are not supported. </div>

Request

GET

```
GET
http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/enhance?f=json&apiVersion=1.0&ruleset=MapRoad&region=%7B%22type%22%3A%22Polygon%22%2C%22coordinates%22%3A%5B%5B%5B10.0%2C0.0%5D%2C%5B20.0%2C0.0%5D%2C%5B20.0%2C10.0%5D%2C%5B10.0%2C10.0%5D%2C%5B10.0%2C0.0%5D%5D%5D%7D
```

POST

```
POST
http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/enhance
```

With Content-Type header application/x-www-form-urlencoded and the following body:

```
f=json&apiVersion=1.0&ruleset=MapRoad&region={
  "type": "Polygon", "coordinates": [[ [10.0, 0.0],
    [20.0, 0.0], [20.0, 10.0], [10.0, 10.0], [10.0, 0.0] ] ] }
```

Response



Note: The jobDetailedReport endpoint is not yet implemented. Calling the jobDetailedReport URL will result in an empty string being returned.

Syntax

```
{
  "jobId": "<jobId>", // jobId is a GUID
  "statusUrl": "<url1>",
  "summaryReportUrl": "<url2>",
  "detailedReportUrl": "<url3>",
  "success": <true | false>,
  "apiVersion": "<api_version>"
}
```

Example

```
{
  "jobId": "c136a3c0-ef19-46e1-b0f5-2823d4bfb88d",
  "statusUrl":
"http://sampleserver/arcgis/rest/services/MyService/Map
```

```
Server/exts/1IntegrateForArcGIS/jobStatus?f=json&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-2823d4bfb88d",
    "summaryReportUrl":
    "http://sampleserver/arcgis/rest/services/MyService/Map
Server/exts/1IntegrateForArcGIS/jobSummaryReport?f=json
&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-
2823d4bfb88d",
    "detailedReportUrl":
    "http://sampleserver/arcgis/rest/services/MyService/Map
Server/exts/1IntegrateForArcGIS/jobDetailedReport?f=jso
n&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-
2823d4bfb88d",
    "success": true,
    "apiVersion": "1.0"
}
```

Retrieve Job Status (jobStatus)

Description


Get the current status of a job.

The validate and enhance requests will return the URL of this request directly with all of the parameters automatically populated (see "Data Validation (validate)" on page 5 and "Data Enhancement (enhance)" on page 9).

URL

`http://<arcgisServerHost>/arcgis/rest/services/<mapServiceName>/MapServer/exts/1IntegrateForArcGIS/jobStatus`

Parameters

Parameter	Required / Optional	Format / Values	Description
f	Optional	<ul style="list-style-type: none"> ▶ html (default) ▶ json ▶ pjson 	The response format.
apiVersion	Required		Version of this endpoint (e.g. 1.0)
jobId	Required		<p>The ID of the job for which to obtain the status (e.g. c136a3c0-ef19-46e1-b0f5-2823d4bfb88d).</p> <div>  Note: The job ID is returned from the validate and enhance requests. </div>

Request

GET

```
GET http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/jobStatus?f=json&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-2823d4bfb88d
```

POST

```
POST
```

```
http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/jobStatus
```

With Content-Type header application/x-www-form-urlencoded and the following body:

```
f=json&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-2823d4bfb88d
```

Response

Syntax

```
{
  "jobStatus": "<NOT_STARTED | RUNNING | FINISHED | ABORTED>",
  "percentageCompleted": "<percentage>",
  "rulesWithMissingClasses": <["rule1", "rule2", ...]>,
  "error": "<Exception>",
  "stackTrace": "<codeline1, codeline2, ...>",
  "success": <true | false>,
  "apiVersion": "<api_version>"
}
```

Examples

Successful response:

```
{
  "jobStatus": "RUNNING",
  "percentageCompleted": 30.5,
  "rulesWithMissingClasses": [ ],
  "success": true,
  "apiVersion": "1.0"
}
```

Schema mismatch error:

```
{
  "jobStatus": "FINISHED",
  "percentageCompleted": 25.0,
  "rulesWithMissingClasses": ["package1/rule1", "package1/rule2"],
  "success": true,
  "message": "Error: Missing classes for these rules: package1/rule1, package1/rule2",
  "apiVersion": "1.0"
}
```

```
}
```

Job error:

```
{
  "jobStatus": "NOT_STARTED",
  "percentageCompleted": 0.0,
  "error": "java.lang.NoSuchMethodError",
  "stackTrace":
"gothic.descriptor.Geometry.convertRingTouches
(I)Lgothic/descriptor/Geometry",
  "success": true,
  "apiVersion": "1.0"
}
```

Retrieve Job Summary (jobSummaryReport)

Description

Provides percentage conformance overall and for each rule.

The validate and enhance requests will return the URL of this request directly with all of the parameters automatically populated (see "Data Validation (validate)" on page 5 and "Data Enhancement (enhance)" on page 9).

URL

`http://<arcgisServerHost>/arcgis/rest/services/<mapServiceName>/MapServer/exts/1IntegrateForArcGIS/jobSummaryReport`

Parameters

Parameter	Required / Optional	Format / Values	Description
f	Optional	<ul style="list-style-type: none"> ▶ html (default) ▶ json ▶ pjson 	The response format.
apiVersion	Required		Version of this endpoint (e.g. 1.0)
jobId	Required		The ID of the job for which to obtain the summary report (e.g. c136a3c0-ef19-46e1-b0f5-2823d4bfb88d).

Request

GET

```
GET
http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/jobSummaryReport?f=json&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-2823d4bfb88d
```

POST

```
POST
```



```
http://sampleserver/arcgis/rest/services/MyMapService/M
apServer/exts/1IntegrateForArcGIS/jobSummaryReport
```

With Content-Type header application/x-www-form-urlencoded and the following body:

```
f=json&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-
2823d4bfb88d
```

Response

Syntax

```
{
  "jobStatus": "<NOT_STARTED | RUNNING | FINISHED |
ABORTED>",
  "percentageComplete": <job_percentage_complete>,
  "tasks": [
    {
      "idx": <number>,
      "path": "Open_Data"|"<pathToRuleId>",
      "status": "<NOT_STARTED | RUNNING |
FINISHED>",
      "processed": <number1>,
      "nonConformances": <number2>,
      "errors": <number3>,
      "type":
"<OpenDataTask|ApplyActionMapTask>"
    },
    ...
  ],
  "rulesWithMissingClasses": [ ],
  "success": <true | false>,
  "apiVersion": "<api_version>"
}
```

Example

```
{
  "jobStatus": "RUNNING",
  "percentageComplete": 40.0,
  "tasks": [
    {
      "idx": 1,
      "path": "Open_Data",
```

```

        "status": "FINISHED",
        "processed": 492235,
        "nonConformances": 0,
        "errors": 0,
        "type": "OpenDataTask"
    },
    {
        "idx": 2,
        "status": "FINISHED",
        "processed": 492235,
        "nonConformances": 14428,
        "errors": 0,
        "type": "ApplyActionMapTask",
        "path": "Essential Geometric
Checks/Check_Duplicate_Points"
    },
    {
        "idx": 3,
        "status": "NOT_STARTED",
        "processed": 0,
        "nonConformances": 0,
        "errors": 0,
        "type": "ApplyActionMapTask",
        "path": "Essential Geometric
Checks/Check_Duplicate_Features"
    },
    {
        "idx": 4,
        "status": "NOT_STARTED",
        "processed": 0,
        "nonConformances": 0,
        "errors": 0,
        "type": "ApplyActionMapTask",
        "path": "Essential Geometric
Checks/Check_Kickbacks"
    },
    {
        "idx": 5,
        "status": "NOT_STARTED",

```

```
        "processed": 0,  
        "nonConformances": 0,  
        "errors": 0,  
        "type": "ApplyActionMapTask",  
        "path": "Essential Geometric  
Checks/Check_Spikes"  
    },  
    ],  
    "rulesWithMissingClasses": [ ],  
    "success": true,  
    "apiVersion": "1.0"  
}
```

Retrieve a List of Jobs (getJobs)

Description

Displays all jobs and their status.



Note: This includes *all* jobs that are active on the server, not just the jobs that have been created through the current map service.

URL

`http://<arcgisServerHost>/arcgis/rest/services/<mapServiceName>/MapServer/exts/1IntegrateForArcGIS/getJobs`

Parameters

Parameter	Required / Optional	Format / Values	Description
f	Optional	<ul style="list-style-type: none"> ▶ html (default) ▶ json ▶ pjson 	The response format.
apiVersion	Required		Version of this endpoint (e.g. 1.0)

Request

GET

```
GET
http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/getJobs?f=json&apiVersion=1.0
```

POST

```
POST
http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/getJobs
```

With Content-Type header `application/x-www-form-urlencoded` and the following body:

```
f=json&apiVersion=1.0
```

Response

Syntax

```
{
  "success": <true | false>,
  "apiVersion": "<api_version>",
  "jobs":
  [
    {
      "id": "<job_id>",
      "jobStatus": "<NOT_STARTED | RUNNING |
FINISHED | ABORTED>"
    },
    ...
  ]
}
```

Example

```
{
  "success": true,
  "apiVersion": "1.0",
  "jobs":
  [
    {
      "id": "3a057f1e-72f1-4a44-952e-
11c3efc1e08a",
      "jobStatus": "RUNNING"
    },
    ...
  ]
}
```

Delete a Job (deleteJob)

Description

Delete a job.

Jobs that have been created using the validate or enhance requests must be deleted when they are no longer needed, in order to free up resources.



Note: The delete operation needs to stop the job and clean up resources so may not be instantaneous for jobs that are in progress. This is an asynchronous operation so the return of the request does not mean that the deletion is complete.

URL

`http://<arcgisServerHost>/arcgis/rest/services/<mapServiceName>/MapServer/exts/1IntegrateForArcGIS/deleteJob`

Parameters

Parameter	Required / Optional	Format / Values	Description
f	Optional	<ul style="list-style-type: none"> ▶ html (default) ▶ json ▶ pjson 	The response format.
apiVersion	Required		Version of this endpoint (e.g. 1.0)
jobId	Required		The ID of the job to be deleted (e.g. c136a3c0-ef19-46e1-b0f5-2823d4bfb88d).

Request

GET

```
GET
http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/deleteJob?f=json&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-2823d4bfb88d
```

POST

```
POST
```

```
http://sampleserver/arcgis/rest/services/MyMapService/MapServer/exts/1IntegrateForArcGIS/deleteJob
```

With Content-Type header application/x-www-form-urlencoded and the following body:

```
f=json&apiVersion=1.0&jobId=c136a3c0-ef19-46e1-b0f5-2823d4bfb88d
```

Response

Syntax

```
{
  "success": <true | false>,
  "apiVersion": "<api_version>"
}
```

Example

```
{
  "success": true,
  "apiVersion": "1.0"
}
```