

SWIM Registry Service Upload Guidance

A guide on how to register SWIM service descriptions/definitions

Tiago Mynsberghe 3rd April 2025



Overview

- 1. Introduction
- 2. Account Creation
- 3. Important resources
- 4. Upload process
- 5. Validation process
- 6. Revision/Update of your service
- 7. Next steps

Intro: Concept

Information Services Discoverability





6.5 SWIM REGISTRY

6.5.1 A SWIM registry supports information service discoverability and provides search and filtering functionalities of service overview; it can typically be accessed over the Internet. A SWIM registry provides a registration process that publishes information service overviews in a controlled manner, ensuring that registered overviews satisfy specific requirements (e.g., completeness) and only those authorized can modify the information in the overviews. A SWIM registry is an important and well-defined component in SWIM (see Figure 6-2).



Introduction: SWIM Registry Content



 $\mathbf{\Phi}_{0}^{0}$

Service Descriptions

The registry provides information about upcoming or implemented information services by service providers in SWIM. It provides all information required by service consumers to identify and implement interfaces to information services.



Service Definitions

The registry provides also information about service definitions, that are provider agnostic and reusable descriptions of services that facilitate alignment and interoperability in the implementation of services.

Service Definitions Harmonized Deployment

Service Descriptions

Service Implementation Discovery



Account Creation

https://eur-registry.swim.aero/user/register

Create an account on:

Please use your official organization e-mail !

Create new account Create new account Reset your password Log in Email address * john.doe@organization.com The email address is not made public. It will only be used if you need to be contacted about your account or for opted-in notifications Full name * John Doe Several special characters are allowed, including space, period (.), hyphen (-), apostrophe ('), underscore (_), and the @ sign Organisation * Your Organization Registration justification I want to work and follow up on SWIM-related projects Please explain why do you want/need an account Subscribe to new services Notifications frequency * Immediately I have read and I agree with the terms and conditions CAPTCHA * I'm not a robot reCAPTCH/ Create new account

Account Creation

If you plan to publish services in the registry, you need to be registered as an "Organisational Editor" from an official organization through the registry. Please make the request in the "Registration Justification" if you wish to be Organisational Editor (If you Organization is already registered. If not, please also request it in the same field), or send an email to swim.registry@eurocontrol.int

Create new account	
Log in Create new account Reset your password	Service Import Task
Email address *	Select provider *
john.de⊚organization.com	- Select -
The email address is not made public. It will only be used if you need to be contacted about your account or for opted-in notifications.	- Solect -
Full name *	EUROCONTROL
John Doe	DSNA&ENAV
Several special characters are allowed inclusion space, period (1) howhen (1) anostrophe (1) and the @ sion	METEO-FRANCE
Organisation *	DFS
Your Organization	ENAIRE
Penistration instification	DWD
Lugant to mark and fallow up as CUD1 adoted evaluate	EUROCONTROL_&_SLOVENIA_CONTROL
I want to work and routow up on Swite-related projects	DMI
	DIRA Indea Avitaeh
	Maria Avreori Merisare
Please explain why do you want/need an account	
Subscribe to new services	DSNA
Notifications frequency *	Met Office
Inmediately	FMI
	EUROCONTROL NM
I have read and I agree with the terms and conditions	PANSA
CAPTCHA *	Meteomatics
I'm not a robot	Croatia Control Lta.
Create new account	



Account Creation

Copy/Paste

the link

-Your account is created and has to be approved by the SWIM Registry administrators.

-When your account gets approved, you will receive an e-mail to create a password and get your credentials.

Account details for	at SWIM Registry (approved)
SWIM Registry <eur-registry@swim.aer< td=""><td>0></td></eur-registry@swim.aer<>	0>
(i) We removed extra line breaks from this message.	
Your account at SWIM Registry has been activated.	
You may now log in by clicking this link or copying and browser:	pasting it into your
https://eur-registry.swim.aero/user/reset/	
This link can only be used once to log in and will lead y	ou to a page where you can set your password.
After setting your password, you will be able to log in a	t https://eur-registry.swim.aero/user in the future using:
username: password: Your password	
SWIM Registry team	



Important resources

Service Description example:

https://swim-eurocontrol.atlassian.net/wiki/spaces/SWIM/pages/60752747/Example+service+description+-+Donlon+TOBT+Setting+Service

Service Definition example:

https://swim-eurocontrol.atlassian.net/wiki/spaces/MSS/pages/60162182/IWXXM+METAR-SPECI+Subscription+and+Request+Service+-+Service+Definition

Service Description schema (.json)

https://github.com/eurocontrol-swim/service-metadata-schema/blob/main/description/DESCRIPTION-V2.json

Service Definition schema (.json)

https://github.com/eurocontrol-swim/service-metadata-schema/blob/main/definition/DEFINITION-V2.json



2 ways of doing:

1) Manual input

*If you can't see the green buttons, go to slide nr 14



8. EUROCONTROL

Create Service 1	Manual input	
Create Service 1		Last saved: Not saved yet Author: Revision log mesage
	Save Cancel	

9 EUROCONTROL

1) Manual input examples

https://swim-

eurocontrol.atlassian.net/wiki/x/awOfAw?atlOrigin=eyJpIjoiMjI3ZmZmYjc0NzZmNGNkYThkZWVkZDk3Mjg4MGE2NmUiL CJwIjoiYyJ9



2 ways of doing:

2) Import .json

*If you can't see the green buttons, go to slide nr <u>14</u>





JSON Upload tips:

-If you are not used to working with .json schemas, it's common practice to download an already existing service description/definition .json and take it as a "template" to then fill your own description/definition.

-The download can take some time to trigger.

WXXM METAR-SPECI Subscription and Request Service 1.0					
VXXM METAR-SPECI SUBSCRIPTION & REQUEST SERVICE Service Definition	Abstract The IWXXM METAR-SPECI Subscription and Request Service provides the ser subscribe to the service, specifying the aerodrome of interest, and receive info relevant meteorological information. The meteorological information is issued within the aviation domain.	Current JSON Original JSON vice consumer with METAR/SPECI report(s) for one or more aerodromes of a State as it becomes available. The service consumer can ormation as it becomes available. It is also possible to send a direct request, using a request-reply mechanism, to the service to get the d by the designated Aeronautical Meteorological Station. The meteorological information is only intended to be used by service consumers Subscribe	2.		
Service Type SWIM_DEFINITION Business Activity Type INFORMATION_MANAGEMENT Intended Consume AIR_TRAFFIC_SERVICE_PROVIDER + Show More Information Exchange Category METEOROLOGICAL_INFORMATION_EXCHANGE Application Message Exchange Pattern Entity PUBLISH_SUBSCRIBE + Show More		Provider EUROCONTROL EUROCONTROL is an intergovernmental organisation with 42 Member and 2 Comprehensive Agreement States. Point of Contact EUROCONTROL			

JSON Upload tips:

-But please always refer to the Metadata schema when adding a new field to your .json to make sure the structure and types are correct.

https://swim-eurocontrol.atlassian.net/wiki/spaces/SWIM/pages/60751890/Service+Metadata+Schema

Versions						
In support of	service descriptions		c	orvice Description scheme		
version		details	3		supporting mo	aterial
v2.0.0		Updated to reflect the la service description spec	atest version of the SWIM cification.	https://github.com/eurocontrol-swim/service-metadata- schema/blob/main/description/DESCRIPTION-V2.json	Example servio	ce description
v0.0.3d		initial version used by th	ne SWIM Registry			
		Note: This version is no	longer used.			
In support of	service definitions					
version	details			ce Definition Schema		supporting material
v2.0.0 initial version used by the SWIM Registry		https://github.com/eurocontrol-swim/service-metadata-schema/blob/main/definition/DEFINITION- V2.json			Example service definitions	
The purpos	e of the service metada	ta schemas				
The service metada	ata schemas provides a structured nota	tion for describing service	IS.			
They aim to						
• facilitate harmor	nisation in describing services and					
• facilitate easier processing by systems. For example, the European SWIM Registry has developed functions to import and export service descriptions that use the schema.						
The schemas						
benefit service providers in facilitating the production of service descriptions, including importing in registry and conformance to the SW specifications						
benefit service consumers with enhanced harmonisation of service descriptions						
 allow service de 	 allow service descriptions to be processed by systems - this includes upload into a system, exchange between systems and transformation (e.g. to service overview). 					



Reminder:

- You need to be a registered service provider through the registry to publish a service.
- You also need the "Organisational editor" role to be able to publish a service.
- If you want to register as a provider send us an email at <u>swim.registry@eurocontrol.int</u>

elect provider *	
- Select -	
- Select -	
EUROCONTROL	
DSNA&ENAV	
METEO-FRANCE	
DFS	
ENAIRE	
DWD	
EUROCONTROL_&_SLOVENIA_CONTROL	
DMI	
BIRA	
Indra Avitech	
MetSafe	
EUROCAE	
DSNA	
Met Office	
FMI	
EUROCONTROL NM	
PANSA	
Meteomatics	
Croatia Control Ltd.	



Convice Import Teek

- 1. For a Service Description, choose type as "Compliant".
- 2. Add your .json file describing the SWIM service description.

Services	Documents
	Services



Example of a service description on paper + .json

Forma Service description ide	at of	the ser	vice description	Donlon TOBT Setting Service Description This are example of Service Description for a factious service, with the intension to illustrate the concorners service Description Identification Service Description Identification	Service standard reference This arrite conforms to the Tageo(Stip
Trace SWIM-SERV-030				edition 0.95b reference date 23/10/2018 General staggigg elements	Operational and inciness centext Operational and inciness centext The mean state of the state of the state of the state of the state in 64,000 its important to allow A-CDM Partners to set the value of some milest necessary. The desired example is to allow the Alice's Corretor or the Ground Hardler to a
service description identification edition reference date 2020-05-02		Donion TOBT Setting Service 0.93i 2020-05-02	2 Description	service identifications zume TegetoffBioofCinesetting Service version 1.03 absorved: the TygetoffBioofCinesetting service supports the Arport COM concept and its mediamentation by allowing ACOM Partners, typically aircraft operators and ground handlers, with the capability to at the Target off-Bioot Time (TOPT) that indicates the target of a set of service supporting the Aliport COM concept and its mediamentation by providing the ACOM partners with common Statistication Awareness	Record Time (COBT) mat indicate walks in the target time for the aircraft to be area Not any value gogg Age(age(bg), five any pairs) at the more balance and the gegging walks gogg Age(bg), and the second
Trace SWIM-SERV-040				Service Provider argenitation policy, Airport Operator policy of contact Forequest access to the service: http://www.donlos-airport.com/awim/service- resuest For Indents on services in operation, contact the Service desk [24/7]: +665 555 of service-desk @donlon-airport.com	The service is defined as safety two tilts, which were derived from the A CDM in Neocaliz IRE 1 To allow the Arcraft Operator or Ground Handler to jet, update or elec the Target off block Time of a departing flight. This is done in accorden operations involving Target off block Time that the able between A-C and 11 (derived from: Jinport CDM Implementation Nanaal i4) IRE 2 To allow the competent autointy to at the able of the Target of Flag plan and competent autointy and the other work, update ablered constant of the plant of competent autointy and the time of the safety off plant and the plant of competent autointy and the form work, update ablered constant off the specific comparisons in other works, update ablered plant and competent autointy and the form works, update ablered plant and the specific comparisons in other works, update ablered plant and the specific comparisons in other works, update ablered plant and the specific comparisons in other works, update ablered plant and the specific comparisons in other works, update ablered plant and the specific comparisons in other works, update ablered plant and the specific comparisons in other works, update ablered the safety and the specific comparisons in other works, update ablered the safety and the specific comparisons in other works, update ablered the safety and the specific comparisons in other works, update ablered the safety and the safety and the safety ablered by the competent and the safety an
ervice identification service ervice abstract Trace SWIM-SERV-050	e name TargetO version 1.3.0)ffBlockTimeSetting	<pre>"serviceIdentification": { "name": "TargetOffBlockTimeSetting", "version": "1.3.0" }, "serviceAbstract": "The TargetOffBlockTin "serviceProvider": { "provider": { "provider": "Donlon Airport Operator"</pre>	meSetting service supports the Airport CDM concept an	d its implementation by allowing A-CDM
<pre>service abstract block Time (IOBI) that indicates the target time for the airorat to be re Common Situation Awareness about flights at a CDM airport.</pre> "providen Description": "DAO", "providen Description": "Donlon Airport Operator is the organisation responsible for all operations at Donlon airport.", "providen Type": ["AIRPORT_OPERATOR"], "pointOfContact": [{ "name": "Customer Relations", "contactInformation": [{ "type": "URL", "address": "http://www.donlon-airport.com/swim/service-request" }], "role": "To request access to the service." }]				perations at Donlon airport.",	



2 ways of doing:

1) Manual input

*If you can't see the green buttons, go to slide nr <u>14</u>





Create Service	Manual input	
Create Service		Last saved: Not saved yet: Author: Revision log message
	Save Cancel	

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2 ways of doing:

2) Import .json

*If you can't see the green buttons, go to slide nr <u>14</u>





2) Import .json

- 1. For a Service Definition, choose type as "Definition".
- 2. Add your .json file describing the SWIM service definition.

ſ	Service Import Task		
	Select provider *		
	EUROCONTROL		
9	Select type *		
	Definition 1.		
	Add json file *		
	Choose File No The ser2.		
	Oproad json me, anowed extensions: json		
	Create 3.		
	Co-financed by the Connecting Europe Facility of the European Union	Services	Documents



2) Import .json

- An error may indicate your .json doesn't validate against the SWIM_DEFINITION schema.
- In this case, go back to the indicated error in your .json, correct it and re-import the corrected .json (repeat steps to import .json)



Provider EUROCONTROL Service file ACS_GDSS.json Import Type Definition	
Your JSON is invalid, based on SWIM_DEFINITION schema	
/informationService/informationDescription The required properties (informationDefinition) are missing.	
After correction	
Provider EUROCONTROL Service file ACS_GDSS_1.json Import Type	
Your JSON was validated against the SWIM_DEFINITION schema and the import task is ready, please select "Run" to perform the impo	vrt.
Run	21 EUROCON'

2) Import .json

Please verify this goes to 100% as it may block and not upload the full .json

If it blocks to a certain %, your .json may contain an error. Please refer to slide nr <u>30</u>

	Import Service
Creating Information Description entities	
63%	
Processed 5 out of 8. Estimated time: 9 sec.	



You should find your service as a draft in the appropriate service type menu (Description or Definition).





You can edit the content by pressing the pencil edit icon

Home / Service Descriptions / ADS-C Ground Distribution SWIM Service ADS-C Ground Distribution SWIM Service 1.0 The ADS-C Ground Distribution Service distributes to ground users the ADS-C data collected from ATS B2 equipped aircraft by the ADS-C Common Service. It supports a Publish/Subscribe Push Message Exchange Pattern for the distribution of ADS-C data, flight status changes and Request/Reply Message Exchange Pattern to support the creation of Demand Contract Requests and to query flight status by ground users. Subscribe Service Type Provider SWIM_DEFINITION EUROCONTROL EUROCONTROL is an intergovernmental organisation with 42 Member and 2 Comprehensive Agreement States. Business Activity Type COMMUNICATION_NAVIGATION_SURVEILLANCE Point of Contact EUROCONTROL Intended Consumer AIRPORT_OPERATOR + Show More Information Exchange Category FLIGHT INFORMATION EXCHANGE Application Message Exchange Pattern Entity ONE_WAY



In the edit menu, you can modify the content but also add a thumbnail image to the service definition or description.

Save Cancel 🔒 Delete	/services/eurocontrol-ads-c-ground-distribution-swim
	URL alias
ACS_0D35_5/5011-Wednesday, April 2, 2025 - 10:41 (242381)	Generate automatic URL alias Uncheck this to create a custom alias below.
Service Import Task	Automatic alias
✓ Service Interfaces	
✓ Abbreviations	✓ Change workflow state
✓ Service Description References	256 MB limit. Allowed types: png gif jpg jpeg. Images larger than 800x600 pixels will be resized.
✓ Service Technical Description	One file only.
✓ Service Information Description	
✓ Service General Description	Choose File No file chosen
✓ Service provision	Add a new file
SWIM_DEFINITION ~	∧ Image
Service Type *	↑ Image
About text formats	 Publication scope
	V Publication Scope
	✓ Service Categorisation
	bieny describe the changes you have made.



Going back to your Service definition/description, scroll down to "Show workflow"

FLIGHT_INFORMATION_EXCHANG	E	
Application Message Exchange Pattern Entity ONE_WAY	1	
Geospatial Categorisation Description	ton for the Francisco ATM Alexande	
Other	ion for the European ATM Network.	
Intended Service Provider		
<u> </u>		
	Technical References	
Operational Needs	Operational Needs	
Capabilities	The demonstration of an ADS-C Common Service to collect and distr identified operational needs and benefits of such an ADS-C Common	bute ADS-C data from flights has been achieved by SESAR PJ38 (ADSCENSIO). The SESAR PJ38 deliverable Service.
Functionality		
Access and Use	Information Exchange Requirements The SWIM ADS-C Ground Distribution Service shall be implemented of	ver a Technical Infrastructure conformant with the SWIM-TI Yellow Profile (v1.1+) Infrastructure
Quality of Service	Capabilities Specification. Conformance with the SWIM-TI Yellow Pro	file Infrastructure Capabilities Specification is achieved by satisfying the requirements of the Infrastructure
Quality Of Data		
Abbreviations		
Revision Save Date Wed, 04/02/2025 -	17:28	
Schema version V2		
- Show workflow ~		
Co-financed by the Conne Facility of the European U	cting Europe nion	Services Documents



Change to "Validation" and then "Change Publication Status"

Revision Save Date Wed, 04/02/2025 - 17:28 Schema version v2	
Show workflow *	<pre>Pacification History</pre>
	27. EUR

If the validation process goes through, the service definition/description will automatically be published.



DISCLAIMER:

The Registry will not allow you to change the status to "Validation" if some modifications you made manually do not validate against the schema.

To correct it, you must therefore modify the service definition through the manual edit mode OR by re-importing the corrected .json schema.

If you have any issues changing the status of the service using the workflow shown on slide <u>27</u>, please refer to slide <u>32</u>



Well-known issues (fixing on-going):

1) Reference title too long, try to be complete but a too long title can cause a database bug.

2) "version" field must be a string (e.g "1" is not acceptable – v1.0 is OK) and must not exceed 10 characters





Well-known issues (fixing on-going):

In case publishing the service and validation goes back to "Draft" mode automatically when using the workflow validation method, please use the following procedure to change the status of the service.

It involves using the HMI in the edit mode of the service instead of using the workflow validation. One has to put the workflow state from "Draft" to "Validation" and then go back to edit mode and change the workflow state from "Validation to "Published".

This is all represented in the following slides.



Well-known issues (fixing on-going):

Enter edit mode of the service and change manually the workflow state from "Draft" to "Validation".

Aeronautical Aerodrome Map Request Service 1.0.0

E

The Aeronautical Aerodrome Map Request Service provides a capability for on-request aeronautical aerodrome maps that are generated from aerodrome mapping data. Note: Aerodrome mapping data are based on the ICAO Annex 15 notion of aerodrome mapping data and the related aerodrome mapping datasets. Aeronautical aerodrome maps are a graphical representation of aerodrome mapping data. The service generates aeronautical aerodrome maps from current or next AIRAC cycle aerodrome mapping datasets. Aeronautical aerodrome maps are a graphical representation of aerodrome mapping data. The service generates aeronautical aerodrome maps from current or next AIRAC cycle aerodrome mapping data available in the service back-end. The service encodes the aeronautical aerodrome maps in a graphical format. The consumer of the service can specify in the aerodrome map request: - the individual aerodrome, the aerodrome map layers to be included, and - the geographical reas of interest. The provided aeronautical aerodrome map is used in visualisation contexts as a backdrop map. The service definition provides a common specification for the implementation of Aeronautical Aerodrome Map Request Service instances that conform with EU Implementing Regulation 2021/116 - Common Project One. Note: In the context of European SWIM deployment the Aeronautical Aerodrome Map Request Service capability realizes the SESAR Deployment Programme Aerodrome Mapping Service - Map part. The capability to request airport layout features (i.e. aerodrome Mapping data) is realized by the Aeronautical Information Request Service.

Subscribe

Service Type SWIM_COMPLIANT Abbreviation EUROCONTROL

Life Cycle OPERATIONAL

Business Activity Type INFORMATION_MANAGEMENT

eEAD

In-Operation Date 15-May-2025

Provider EUROCONTROL

EUROCONTROL is an intergovernmental organisation with 42 Member and 2 Comprehensive Agreement States.

Provider Type AERONAUTICAL_INFORMATION_SERVICE_PROVIDER

Dura dan





Well-known issues (fixing on-going):

	V Publication Scope
kt format Rich Text About text format	ats V Image
rvice Type * SWIM_COMPLIANT ~	Change workflow state
Service provision	Current state: Draft
✓ Service General Description	Change to: Draft V Draft
 Service Information Description 	Automatic Initial
✓ Service Technical Description	Generate automatic URL alias
✓ Service Description References	Uncheck this to create a custom alias below. <u>Configure URL alias</u> patterns. URL alias
✓ Abbreviations	/services/eurocontrol-aeronautical-aerodrome-map-
✓ Service Interfaces	Specify an alternative path by which this data can be accessed. For example, type "/about" when writing an about page.
rvice Import Task "SrvDescr_AAMR.1.0_20250331.json-Monday, May 26, 2025 - 09:5	Authoring information Authored on 2025-03-19

33. EUROCONTROL

Well-known issues (fixing on-going):

Repeat the process, go back to the service that is to be published in edit mode. And change the workflow state from "Validation" to "Published"

Aeronautical Aerodrome Map Request Service 1.0.0

The Aeronautical Aerodrome Map Request Service provides a capability for on-request aeronautical aerodrome maps that are generated from aerodrome mapping data. Note: Aerodrome mapping data are based on the ICAO Annex 15 notion of aerodrome mapping data and the related aerodrome mapping datasets. Aeronautical aerodrome maps are a graphical representation of aerodrome mapping data. The service generates aeronautical aerodrome maps are a graphical representation of aerodrome mapping data. The service generates aeronautical aerodrome maps are a graphical representation of aerodrome mapping data. The service generates aeronautical aerodrome maps from current or next AIRAC cycle aerodrome mapping data available in the service back-end. The service eacodes the aeronautical aerodrome maps in a graphical format. The provided aerodrome maps in a graphical format. The provided aerodrome maps is used in visualisation contexts as a backdrop map. The service capability enables various use cases (e.g. Digital NOTAM overlay in ePIB applications). The Aeronautical Aerodrome Map Request Service definition provides a common specification for the implementation of Aeronautical Aerodrome Map Request Service capability realizes the SEAR Deployment Programme Aerodrome Mapping Service - Map part. The capability or equest airport layout features (i.e. aerodrome mapping data) is realized by the Aeronautical Information Request Service.

Subscribe

Service Type SWIM_COMPLIANT Abbreviation

OPERATIONAL

Business Activity Type INFORMATION_MANAGEMENT In-Operation Date

Provider EUROCONTROL EUROCONTROL is an intergovernmental organisation with 42 Member and 2 Comprehensive Agreement States.

Provider Type AERONAUTICAL_INFORMATION_SERVICE_PROVIDER



💼 Delete

Cance

Well-known issues (fixing on-going):

Service Type* SWIM_COMPLIANT ~	∧ Change workflow state
✓ Service provision	Current state: Validation
✓ Service General Description	Change to: Validation Validation
✓ Service Information Description	VRL alia Published Automati Draft
✓ Service Technical Description	Generate automatic URL alias
✓ Service Description References	Uncheck this to create a custom alias below. <u>Configure</u> patterns.
✓ Abbreviations	/services/eurocontrol-aeronautical-aerodrom
✓ Service Interfaces	Specify an alternative path by which this data can be access example, type "/about" when writing an about page.
ervice Import Task	Authoring information
"SrvDescr_AAMR.1.0_20250331.json-Monday, May 26, 2025 - 09:52	



Service should now be published



Revision/Update of your service

In the case of some updates needed after publication of your Service Description/Definition you can re-import the JSON and "overwrite" the current data. Then re-iterate the validation from "Draft" to "Published" mode





This guidance material will be available on SWIM Registry site – Document section

Updates in accordance with Registry evolution



Need support?

Contact us via:

swim.registry@eurocontrol.int





Questions?

swim.registry@eurocontrol.int

tiago.mynsberghe@eurocontrol.int

