

**Data Dissemination Service  
Service Level Agreement**

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# 1. Introduction

## 1.1. **Abstract**

One of the missions of the ESA EO Ground Segment Department is to provide data to places where network connection is not adequately supported. The ESA satellite-based Earth Observation Data Dissemination System (DDS) has been originally developed (in 2001) to provide Envisat data products dissemination service to European users during the satellite commissioning phase. The DDS is currently based on uplink stations located at Kiruna (Sweden) and ESRIN (Italy), plus a growing park of more than 50 operational receiving stations spread over Europe, Africa and South America.

The aim of the service is to allow Cat-1 users, value added company, service provider, who have been authorized by the European Space Agency, to take advantage of DDS for disseminating their own value added products to users in Africa.

The service goals are then to:

1. Empower EO service providers (Duly authorised as Cat-1) with a tool to disseminate EO value added products in areas where terrestrial connectivity is limited or not reliable.
2. Ensure that DDS transmits files which have undergone security checks
3. Reduce security threats from the internet connections to DDS.
4. Offer the possibility to include data dissemination via DDS in any SSE service chain.

## 1.2. **Service category**

<b>Service Category</b>	Data and Information provision services
<b>Sub Category</b>	Satellite Image Dissemination

## 1.3. **Service contact points**

Users can contact:

- **Earth Observation Help Desk**

E-mail: [EOHelp@esa.int](mailto:EOHelp@esa.int)

Phone: +39 06 94180777

For generic questions on the service, including for Cat-1 users the authorisation to use the service. The help desk service will answer within five working days. It is available during working hours of ESRIN working days.

- **EOPI**

E-mail: [EOPI@esa.int](mailto:EOPI@esa.int)

In order to submit a Cat-1 proposal, which is a prerequisite for being authorised to use the service.

- **Service Support Environment Team**

E-mail: [sseteam@esa.int](mailto:sseteam@esa.int)

For problems, questions related to the usage of the SSE service or the connection to the FTPS server. The SSE support is provided during the ESRIN working days, from Monday to Friday from 8:30 to 17:00 CET,

#### **1.4. List of Acronyms**

<b>ESA</b>	European Space Agency
<b>ESRIN</b>	European Space Research INstitute
<b>SSE</b>	Service Support Environment
<b>USER</b>	Registered User on the SSE portal that, if duly authorised, can activate the service
<b>FTP</b>	File Transfer Protocol
<b>SSL</b>	Security Socket Layer
<b>FTPS</b>	FTP over SSL
<b>SERVICE</b>	The Data Dissemination Service on the SSE
<b>DDS</b>	Data Dissemination System
<b>FIFO</b>	First In First Out
<b>END USER</b>	The user who receive the product in via Data Dissemination System
<b>OS</b>	Operating System

#### **1.5. Applicable Document**

<b>R 01</b>	SSE Interface Control Document <a href="http://services.eoportal.org/massRef/documentation/icd.pdf">http://services.eoportal.org/massRef/documentation/icd.pdf</a>
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## **2. Service Characteristics**

Authorised Cat-1 users will have access a secure interface, based on a FTPS account and an associated SSE service to first upload their valued added products and further submit them to DDS for final dissemination to their end users based in Africa.

The core of the DDS relies on the Restricted Reliable Multicast Protocol (RRMP). It ensures the high reliability and performances of the service, handling a forward (IP over DVB-S) satellite channel for data traffic and a terrestrial Internet (or DVB-RCS satellite) return channel for Monitoring & Control.

This service is provided on best effort basis and is in the test phase for evaluation purposes; therefore it may be subject to possible interruptions e.g. should DDS be needed in support to emergency / disaster management.

Data Providers users are encouraged to submit their feedback to the Earth Observation Help Desk, which might lead to improvements of the quality of the service.

## **2.1. Availability**

During the ESRIN working days, from Monday to Friday from 8:30 to 17:00 CET, the SSE portal is always active and support can be requested to the [sseteam@esa.int](mailto:sseteam@esa.int). Network or servers maintenance activities ~~are being performed~~ or ~~due to~~ circumstances beyond ESRIN control may cause the temporary unavailability of the portal.

The ~~s~~Service is monitored during ESRIN working days and recovery actions are performed on best effort basis. If the service should fail during non-working hours, it will be restarted / recovered the next working day.

## **2.2. Condition of use**

A user, who wants to disseminate data via DDS, will have to request authorization to access the Service. The very first condition is to be a Cat-1 user and to have a related project that justifies the request to disseminate data via DDS. None Cat-1 users shall contact first EOPI.

Cat-1 users will further need to provide information about size and format of the files they intend to disseminate. ESA will check compatibility with the DDS capacity / satellite allotment.

If the checks are satisfactory ESA will grant access to the service and authorized users, will receive a FTPS account where to upload the files that need to be transferred via DDS.

Normal utilisation of the service foresees the following steps:

- ~ For file upload, free FTPS client like for example filezilla for Windows OS or lftp (a command-line file transfer program for UNIX and Unix-like systems) can be used
- ~ Once the data have been uploaded the service will perform some checks before making them available to transfer. The checks verify if the uploaded files are in agreement with service terms of use, in particular size, type and absence of virus.
- ~ After upload on the FTPS account, the files will be visible on the SSE Service web page. It shall be noted that a delay may be encountered in the SSE service web page update, due to the checks the files are subject to e.g. a maximum of 10 minutes will be required by the service to check 1G file. By clicking "refresh" button in the SSE service page the list of available files will be updated.  
File not in agreement with the terms of use will not be display in the SSE Service web page and the user will be contacted to clarify improper usage of the service.
- ~ When the files are available on the Service Web page the user will be able to select the files he wants to transfer, to select the destination station(s), and to submit a dissemination request.
- ~ Once the request has been sent to the DDS through the SSE service, the DDS will process it according to a FIFO criterion, and data will be disseminated in the first available slot of the C-Band from 20:00 UTC to 9:00 am UTC.

Note: The file names of the file to be transferred shall match the following regular expression:

`^[A-Za-z0-9_\-\.]*$`

Only alphabetical, numerical, dot, underscore and dash characters are allowed in the filename. To verify if your file match the regular expression you can use the following tool <http://www.regular-expressions.info/javascriptexample.html> inserting the regular expression and the filename you want to transfer.

### **3. Terms and Conditions**

This service is in the test phase for evaluation purposes, therefore possible interruptions may happen.

#### **3.1. Service Output**

The SSE service generates a Dissemination request compliant with the DDS interface and avoids improper usage of DDS resources. Upon request reception, DDS pickup the files/products from the FTPS account and will send them to their destination(s) as specified in the request, using the first available transmission slot in the dissemination hours (from 20:00 UTC to 9:00 am UTC).

#### **3.2. Warranty**

ESA doesn't provide any warranty for this service. ESA will not be deemed liable in respect of a defective Output Product. All other conditions, warranties of any kind, written, oral, statutory, expressed or implied by statute or common law with respect to any Output Product including but not limited to the implied warranty of satisfactory quality, merchantability and fitness for purpose are hereby excluded.

#### **3.3. Disclaimer**

ESA does not assume any liability deemed to have been caused directly or indirectly by any content of the SSE Web site or by this service.

#### **3.4. Termination**

ESA reserves the right to terminate the service at any time without prior notification. If the user defaults in or commits any breach of any of his obligations, ESA shall have the right forthwith to terminate the provision of the service.

#### **3.5. Trademarks**

All brand names and product names are trademarks or registered trademarks or services marks of their respective owners.

#### **3.6. Price**

The service is free of charge for the authorized users.

**3.7.            *Applicable Law***

The license/SLA terms and conditions shall be governed by Italian law.

**3.8.            *Arbitration***

Arbitration for this service shall take place as mentioned in the SLA of SSE.