**GMES & Africa**

**JRC Online Training Session on**

**eStation Maintenance**

**(English Session: 5-7 December)**

**(French Session: 19-21 December)**

**Introduction**

The main goal of the *Training for eStation Maintenance* is to prepare the technical and system administrators of the GMES&Africa Institutions on the installation and maintenance of the systems, in order to smoothly operate the platforms and overcome the possible issues they can face.

In this respect, the workshop has the following objectives:

* Present the structure and functioning of the MESA Station.
* Introduce the eStation 2.0 application[[1]](#footnote-1) as core software component of the MESA Station.
* Demonstrate the Software installation, update and configuration.
* Illustrate how to perform the diagnostic on the Stations.
* Describe the most common issues that can occur on the system and the corrective actions.
* Review and address the issues that were encountered on the deployed stations (conduct a Survey beforehand and prepare a list of issues)
* Indicate how the Helpdesk can be activated in case of Hardware/Software anomalies.

In previous projects, similar sessions of the training were conducted in presence by exploiting the MESA training centers, fully equipped with the MESA station computers. Indeed, this training requires accessing the Hardware to check its status, investigate the different functionalities, and verify the execution of the foreseen tasks. Running the training ‘online’ is therefore challenging, and all adequate measures need to be planned beforehand, in order to effectively present to the participants the above described aspects, and, to some extent, let them familiarize with the stations.

# General description

*Training modality:* the training will be completely executed *online*. The AUC will organize together with JRC the online session on an adequate platform (Zoom) and communicate in advance the procedure for connecting.

*Participants/beneficiaries*: the training is intended for all IT specialists who are involved in the maintenance of the stations in the Institutions beneficiary.

The training execution will be recorded and made available on the project’s DLP (Digital Learning Platform) for re-usage at the national level, and as a general resource for the GMES&Africa community.

*Actors*: JRC staff is responsible for the preparation of the training material and the execution of the training session. EUMETSAT will be involved for illustrating relevant aspects on the EUMETCast data flow and configuration of PC1, and the User Support organization and access.

*Method*: being all the training conducted online, all functionalities of the MESA Stations will be described w/o physical access to the machines, and will be presented through screenshots and video recorded from the monitors of a reference installation.

*Profile of the participants*: the course addresses the needs of the IT specialists in charge of maintaining the eStations at the beneficiary institutions. The ideal candidate is an IT system administrator, familiar with Linux OS (and CentOS in particular), LAN configuration, DB administration (namely PostgreSQL), bash scripting and, to some extent, Python and data processing.

*Number of participants:* no limitations on the number of participants exist, and the training aims at reaching as many interested people as possible.

*Training Preparation*: the participants will be asked to fill in advance a Survey on the Status of the station they have received, in the framework of GMES&Africa or MESA projects.

*Training Schedule*: the training is organized over three days, with 2 hours in the morning and 2 hours in the afternoon. At the end of the latter, the trainers will be available for an additional slot (around 1 hour time) for answering specific questions and doing trouble shooting on the delivered station.

# Training Contents

The Training will be opened by a presentation of JRC, its involvement into GMES&Africa and the role of the eStation in the overall project; the participants will be invited to shortly present their background, their role in the beneficiary Institutions and their experience on the MESA station maintenance.

**Section 1** - **The** **MESA Station**

Goal: describe the hardware and software architecture of the MESA station, detailing the main functionalities of the eStation 2.0 application.

Contents:

* Overall architecture: antenna and 3 PCs
* Data reception: Antenna, LNB and PC1
* PC2 and PC3: the eStation 2.0
* The MESA station as a whole
* The UPS
* The Recovery Mode

Duration: 4 hrs.

**Section 2 - Installation and upgrades**

Goal: describe the installation of the MESA station from scratch, the initial settings and the data copy to the local machine, and the software update mechanism.

Contents:

* Preparation of the installation support (DVD, USB key)
* Installation procedure
  + Pre-installation checks (RAID1 configuration)
  + Installation procedure
  + Post-installation steps (setting of the ‘Thema’, installation of historical archives, connection to the LAN, data pull from JRC reference server)
* Upgrade mechanism: how the check the latest version of the installed software, trigger and monitor the process of upgrading, manual execution of upgrades – with a latest patch provided by JRC in order to have all most recent products available.

Duration: 4 hrs.

**Section 3 - Trouble shooting and User Support**

Goal: explain how the User can request assistance for resolving issues, share the available resources and describe the most common issues that can be happen on the MESA Station.

Contents:

* Organization of the User Support and relevant actors (EUMETSAT and JRC)
* Request of intervention: how to proceed when and issue appears on the MESA Station.
* Description of the existing resources for Diagnostic.
* Presentation of the issues indicated by the participants to the training, and the most common ones that appeared in the MESA and GMES&Africa project.

Duration: 4 hrs.

**Training Agenda**

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|  | Monday 28th Nov 2022  (CET time – GMT+1) | Tuesday 29th Nov 2022  (CET time – GMT+1) | Wednesday 30th Nov 2022  (CET time – GMT+1) |
| ***AM*** | **10:00-12:00 Section 1 – Part 1**  Connection and welcome  General Introduction  Session 1.1: Overall Architecture  Session 1.2: Data Reception (PC1)  Session 1.3: eStation (PC2 and PC3)  12:00-14:00 Break | **10:00-12:00 Section 2 – Part 1**  Connection and welcome  Section 2.1: Preparation of the installation support  Section 2.2: Installation Procedure  Section 2.3: Post Installation Steps  12:00-14:00 Break | **10:00-12:00 Section 3 – Part 1**  Connection and welcome  Session 3.1: Organization of the User Support and HD requests  Session 3.2: Stations Diagnostics  Session 3.3: Troubleshooting  12:00-14:00 Break |
| ***PM*** | **14:00-16:00 Section 1 – Part 2**  Session 1.4: MESA Station as a whole  Session 1.5:The UPS  Session 1.6:The Recovery Mode  *16:00-17:00 Questions and answers and Open Discussion* | **14:00-16:00 Section 2 – Part 2**  Section 2.3: Post Installation Steps – continued  Section 2.4: Upgrade mechanism  *16:00-17:00 Questions and answers and Open Discussion* | **14:00-16:00 Section 3 – Part 2**  Session 3.3: Troubleshooting - continued  *16:00-17:00 Questions and answers and Open Discussion* |

1. The eStation is an EO processing and visualization server, visible at: http://estation.jrc.ec.europa.eu/eStation2/ [↑](#footnote-ref-1)