Training Opportunity for Portuguese Trainees

Reference	Title	Duty Station
PT-2019-OPS-GDI	EGOS-CC Software Engineering	ESOC

Overview of the Unit missions:

The Mission Operations Data Systems Division (OPS-GD) is in charge of developing and maintaining all software applications used for Mission Operations. This spans from the mission control applications, to the simulators, to the software for the ESA Ground Stations. OPS-GD is also in charge of defining and maintaining the software development environment as well as the test and validation infrastructure.

Overview of the field of activity proposed:

The trainee will be involved in the technical tasks described below:

- Familiarisation and development of competences in the European Ground System – Common Core (EGS-CC) and related applications. The EGS-CC is a strategic initiative between ESA, national Agencies and industry to define and develop a common infrastructure which can be used as the basis for both EGSE and Mission Control Systems. The trainee will be involved in the EGOS-CC project, participating in the on-going development, integration and validation activities of the EGS-CC based monitoring and control applications at ESOC;

- Integration of EGS-CC into EGOS-CC development. This includes testing EGS-CC itself, problem investigation and patching as well as support to users;

- Development and validation of EGOS-CC based products deployed as the basis for Mission and Ground Station Operations. This includes a large variety of applications supporting preparation, planning, simulation, execution and evaluation;

- Testing: Due the complexity of the Ground Segment Systems, it is necessary to test the EGOS-CC based products in a representative mission environment in collaboration with the future end users;

- Automation: To improve efficiency, the objective is to automate test execution and system deployment using existing frameworks.

Required Education

The applicant shall have a solid back-ground in software engineering and be able to quickly learn and apply new software technologies. Knowledge on component based and distributed architectures (OSGi, BluePrint, Karaf, JeroMQ, etc.), cluster technologies (Hadoop, HDFS), scripting (Groovy) and Eclipse related technologies (Equinox, EMF, etc.) is desirable.

Experience of the Java programming language and platform as well as Linux is required.