Evaluation Criteria for Transferring and Integrating Services into the DARIAH Hosting Environment (R 2.2.1)

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Responsible Partner JSC

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1. Introduction

This document specifies technical requirements posed on services that should be hosted within DARIAH. Before a service for humanities can be transferred into the DARIAH Hosting Environment, it has to be justified that the service is important for DARIAH and its users, what will be done by the AG Service-Lifecycle[1]. This process is out of the scope of this document. It deals with the technical evaluation which is independent from a suitability evaluation which takes place beforehand and is conducted by different bodies.

It should be stressed at this point that the DARIAH Hosting Environment is a matter of research itself. Computer scientists are seeking for the best ways of providing resources and assisting the users. It is still in the pilot phase and thus undergoes several changes, nevertheless the provided services are of high-quality and can be used for both testing purposes and production-ready hosting. This document is a living document and can change in the future.

The current version of the requirements results from discussions with the representatives of the main DARIAH computing centers: GWDG, JSC, and RZG.

2. Requirements

2.1. General technical requirements

- for each service a short description of its functionality need to be provided, including requested version, a link to development history (releases) and a future roadmap.

- the services must be open-sourced and have a permissive license (e.g. Apache, BSD), also the data stored in the machines (i.e. content managed by the services) must have a permissive license.

- a service must survive a reboot of the hosting environment in a automated way, appropriate scripts for this must be provided.

- name and email address of a person responsible for the service needs to be provided, this person should be able to answer questions regarding configuration, etc.

- documentation of the service should be available, e.g. on the internal DARIAH wiki.

2.1.1. An exact specification of the runtime environment must be provided

- for stand-alone applications only open-source operating system will be supported (Debian, Ubuntu LTS, SLES, CentOS).

- an estimation of resources needed by the application is needed (CPU, RAM, HDD size), those estimations will be taken into account but there is no guarantee that all the

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[1] https://dev2.dariah.eu/wiki/x/UQmPAQ

resources will be provided from the day one, rather dynamic reallocation of resources to account for increasing load will be applied.

- estimated load should be provided (expected number of users).

2.1.2. A specification of the runtime environment must include requested dependencies

- for the service dependencies the same criteria with regard to open-source, documentation and licenses hold.

- for system libraries dependencies: current, supported, and secure version available in generic open-source operating systems must be taken.

- for embedded applications, current versions of application servers (Tomcat, Apache) will be supported.

- for services running in application servers necessary changes in the general config files should be provided (if applicable).

2.2. Security requirements

All service should fulfill basic security requirements (e.g. passwords must not be stored nor exchanged in plain text). After a vulnerability is detected in an application or is detected and fixed in the operating system and the application fails to operate again afterwards, updates have to be provided and applied.

2.3. Network requirements

For stand-alone services, exact specification of port (ranges) need to be provided (necessary to configure firewall rules). Embedded services hosted within Apache or Tomcat will get the port as configured by the computer center during the server installation. The network-traffic of the applications will be monitored. Typically only passive applications (responding to external requests and not initiating own network connections) will be supported.

2.4. Monitoring requirements

DARIAH provides a monitoring infrastructure. To make sure that a service is available, an endpoint for functional monitoring should be available, which then can be integrated in the monitoring infrastructure. In case of problems, a service administrator gets notifications to a provided email address.