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Image Creation Service User Guide

Activity 2: Service Construction

WP 2.1: IDE, programming model and runtime design and implementation

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Dissemination Level

PU	Public	X
PP	Restricted to other programme participants (including the Commission)	
RE	Restricted to a group specified by the consortium (including the Commission)	
CO	Confidential, only for members of the consortium (including the Commission)	



Version History

Version	Date	Comments, Changes, Status	Authors, contributors, reviewers
0.1	2012-04-12	Initial version	Roland Kübert (HLRS)
0.2	2012-05-31	Update the document	Pierre Gilet (HLRS)
0.3	2013-03-18	Update the document	Anthony Sulistio (HLRS)
1	2013-07-06	Final version	Malena Donato (ATOS)



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1 Introduction

This document includes the user guide for the software component Image Creation Service.

1.1 Glossary of Acronyms

Table 1 - Acronyms table

Acronym	Definition
D	Deliverable
WP	Work Package
ICS	Image Creation Service

2 Image Creation Service User Guide

2.1 Release information

Table 2 - Release information

Component Name	Release Number	Release Date
Image Creation Service	2.0-SNAPSHOT	2013-03-31

2.2 Introduction

The Image Creation Service is a RESTful web service that allows the creation of custom VM images from base images. Images can be cloned from the base images and then customised by adding files, setting permissions of files in the image or extracting archives to an image.

2.3 Functionalities

- Clone images from base images
- Add flat files to an image
- Extract archives into an image
- Add WAR files into an preconfigured Apache Tomcat's webapps folder
- Set permissions on files in a customised image
- Create an image according to a service manifest or a set of requirements, such as image size and operating system.

See Section 2.5 for usage information for these functionalities.

2.4 Known limitations

ICS needs to be installed and run on a physical machine for better I/O performance. This is because qcow2 images are frequently created, updated and deleted.

2.5 Getting Started

2.5.1 Using the Software

The ImageCreationServiceRESTClient package provides a client that can be used by every component. It is self explanatory. There is API documentation for the client if in doubt.

Alternatively, automated scripts have been created. Usage:

```
./scripts/test_ics.sh [IP_address]
```

```
./scripts/test_image_requirement.sh [IP_address]
```

Note that [IP_address] means optional. If this parameter is not given, ICS will run in a localhost.

2.5.2 Configuration

Configuration can be done via the properties file located in `/opt/optimis/etc/ImageCreationService/ics.properties` file.

This file is heavily commented so that you know what each setting does.

2.6 FAQ

No entries yet.

2.7 Other information

2.7.1 Directory Structure

This directory contains the following subdirectories or files:

- `./ImageCreationServiceCore` : Core ICS classes
- `./ImageCreationServiceREST` : REST API of ICS
- `./ImageCreationServiceRESTClient` : ICS Client code (a simple example)
- `./scripts` : scripts on how to use ICS and configure the qcow2 base images

2.7.2 Contributors

The following people at HLRS (University Stuttgart) designed and developed the ICS for OPTIMIS (they are listed alphabetically):

Roland Kuebert, Anthony Sulistio, Tinghe Wang.