

# Rhidmo

## Table of Contents

1 What is Rhidmo?.....	1
1.1 Introduction.....	1
1.2 Prerequisites.....	1
2 Installation.....	2
2.1 Deploy the EAR.....	2
2.2 Create RHIDMO_RT Datasource.....	3
2.3 Set Application Parameters.....	5
3 Use Rhidmo.....	7
4 Trouble Shooting.....	8
4.1 Configuration.....	8
4.2 Log Viewer.....	9
5 Licenses.....	10
5.1 Rhidmo.....	10
5.2 ByteBuddy.....	13
5.3 SLF4J.....	13

# **1 What is Rhidmo?**

## **1.1 Introduction**

## **1.2 Prerequisites**

## 2 Installation

This chapter describes the installation of Rhidmo on the JAVA AS server. It assumes that the IDM WebDynPro GUI application (“IDM GUI”) is successfully installed on the same machine. Is is possible to install the IDM GUI application on more than one machine. If so, please install Rhidmo on machines where the IDM GUI is installed.

## 2.1 Deploy the EAR

There are several ways to deploy an EAR file to the SAP Java AS serve. One of the easiest is proably using the telnet interface.

1. Copy the EAR file to the JAVA AS machine. Make sure that the <sid>adm user is able to read the file.
2. Use the telnet program to connect to the telnet port (usually 50008) and log in using administrative privileges (WARNING: the telnet protocol is not encrypted, it is best used locally as shown in the screenshot below):

```

root@kali:~# telnet localhost 50008
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.

*****
*****
****###*****###*****#####*****
***#####**#####**#####
***#####**#####**#####
***#####**#####**#####
*****#####**#####**#####
*****#####**#####**#####
***#####**#####**#####
***#####**#####**#####
*****#####
*****

Telnet Administration
SAP Java EE Application Server v7.40

User name: admin
Password:

Welcome to server node 00000000.

>

```

3. Deploy the application using the deploy command:

```

>deploy /tmp/deploy/rhidmo-ear-1.0.ear

Deploy settings:
  life_cycle=bulk
  on_deploy_error=stop
  on_prerequisite_error=stop
  version_rule=lower
  workflow=normal

If there is an offline deployment, Telnet connection to host may be lost, but the
result can be seen using [get_result] command

Processing deployment operation, wait...

===== PROGRESS START =====

Deploying [de.foxysoft_rhidmo (sda)] ...
Deployment of [de.foxysoft_rhidmo (sda)] finished.

===== PROGRESS END =====

===== DEPLOY RESULT =====

  sdu id: [de.foxysoft_rhidmo]
  sdu file path: [/usr/sap/1...7/J00/j2ee/cluster/server0/temp/tc-bl-deploy_controll
er/archives/131/12311243856035/rhidmo-ear-1.0.ear]
  version status: [HIGHER]
  deployment status: [Success]
  description: []

===== END DEPLOY RESULT =====

===== Summary - Deploy Result - Start =====
-----
Type | Status : Count
-----
> SCA(s)
> SDA(s)
  - [Success] : [1]
-----
Type | Status : Id
-----
> SCA(s)
> SDA(s)
  - [Success] : de.foxysoft_rhidmo,
-----
===== Summary - Deploy Result - End =====

>

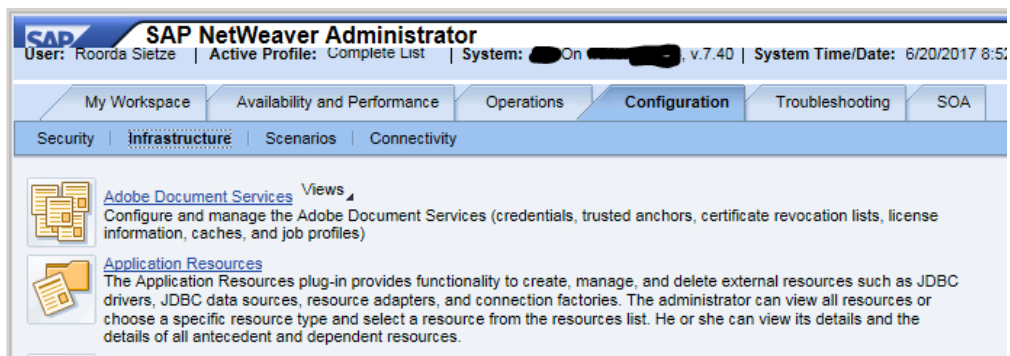
```

Watch for the “Success” message (as shown in the screenshot above). Correct any errors. Rhidmo is now deployed and must be configured before use. This is explained in the following chapter.

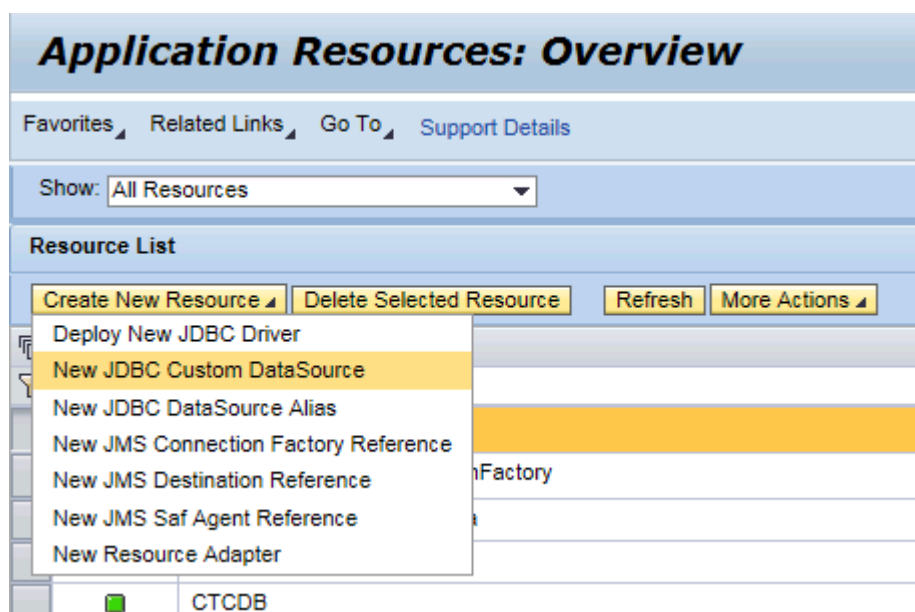
## 2.2 Create RHIDMO\_RT Datasource

The standard IDM data source that is configured in JAVA AS uses the “<prefix>\_prov” user which does not have sufficient privileges to be used with Rhidmo. Consequently, another data source must be configured with the “<prefix>\_rt” user:

1. Log in with a SAP supported browser to the JAVA AS with a user with administrative privileges and start the Netweaver Administrator (URL: <http://<machine>:<port>/nwa>). Use https if available:



2. Go to “Configuration” → “Infrastructure” (as shown in the screenshot above) and click on the “Application Resources” link. Press the button “New JDBC Custom DataSource”:



3. Fill in the form with the same values as for the “IDM\_DataSource” Data Source. Please remember to exchange the “<prefix>\_prov” user with the “<prefix>\_rt” user (and adjust the password accordingly):

**New JDBC Custom DataSource Creation**

Save Cancel

**Settings** Connection Pooling Additional Properties JDBC DataSource Aliases

Application Name: RHIDMO\_RT

DataSource Name: \* RHIDMO\_RT

Driver Name: \* MSS

SQL Engine: \* Native SQL

Isolation Level: \* Default

JDBC Version: \* 1x (without XA support)

Driver Class Name: \* com.microsoft.sqlserver.jdbc.SQLServerDriver

Database URL: \* jdbc:sqlserver://192.168.7.61:1433;databasename=idm80\_db

User Name: \* idm80\_rt

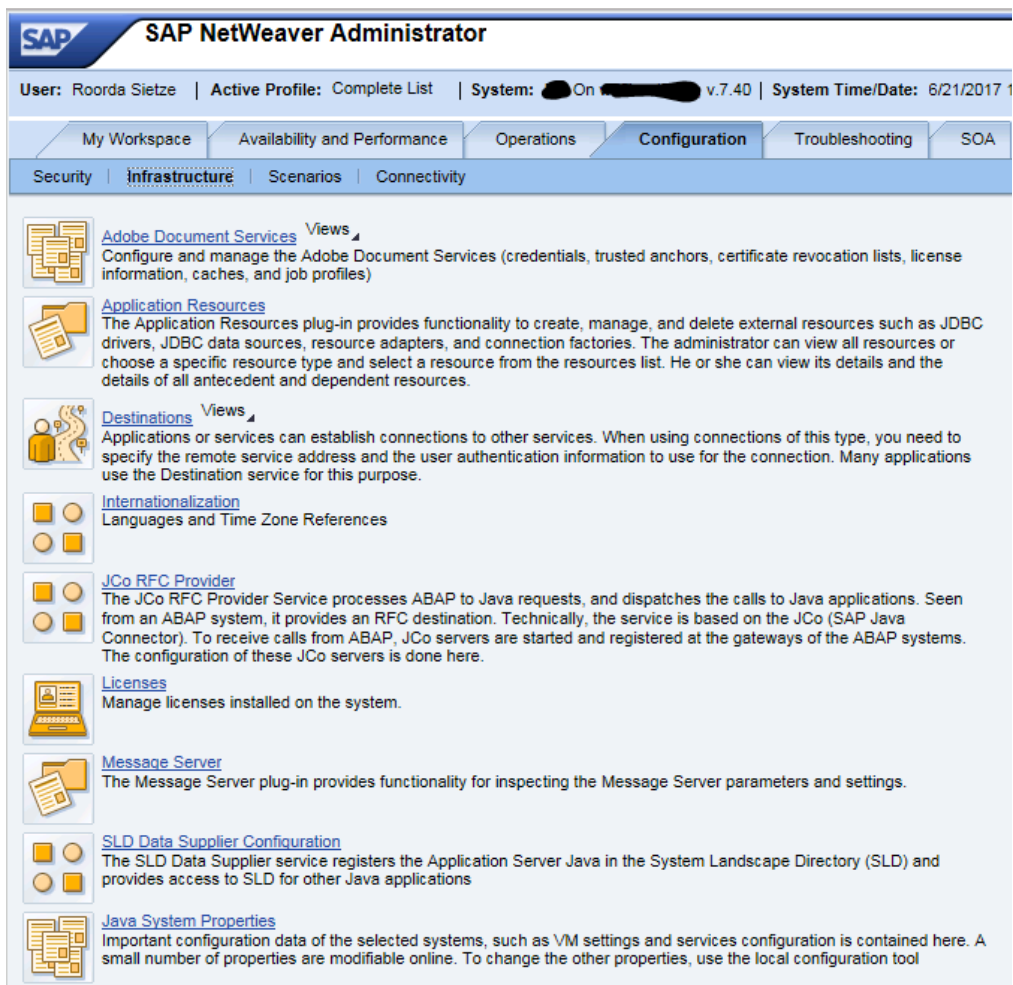
Password: \* .....

Description: Rhidmo DataSource

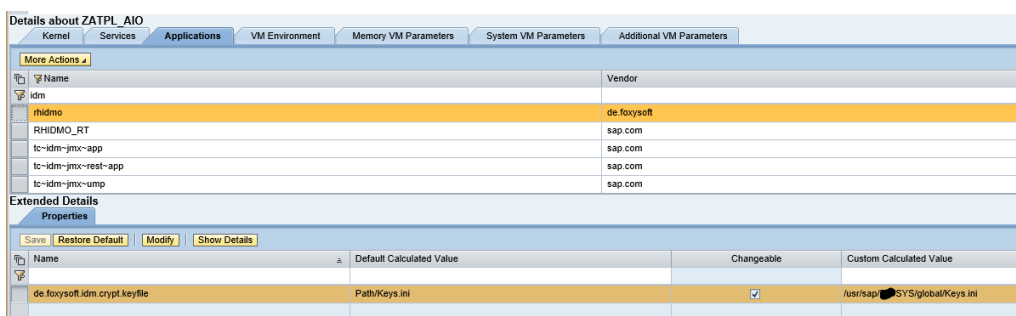
The screenshot above shows example values for the Microsoft SQL Server database using “idm80” as the prefix.

## 2.3 Set Application Parameters

1. While still in NWA, go to “Configuration” → “Infrastructure”:



2. Press the link “Java System Properties” and find the tab “Applications” (somewhere in the middle. Filter on “idm” to see only SAP IDM relevant content:



3. Change the property “de.foxysoft.idm.crypt.file” to have the same value as the property “com.sap.idm.jmx.crypt.keyfile” of the “tc~idm~jmx~app” application. Press the “Save” button to store your changes.



### 3 Use Rhidmo

Each form that needs to use Rhidmo must be configured. Please enter the following values in the form properties:

The screenshot shows the 'General' tab of the 'Rhidmo8TestForm' configuration dialog. The 'Enabled' checkbox is checked. The 'Form ID/Name' field contains '186/Rhidmo8TestForm'. The 'Form Type' dropdown is set to 'Regular'. The 'Repository' dropdown is set to '-- None --'. The 'Use Inactive Entries' and 'Use Context Variables' checkboxes are unchecked. The 'Extension Framework' dropdown is empty. The 'Extension Class' field contains 'de.foxysoft.rhidmo.TaskProcessingDynamic'. The 'onLoad' and 'onSubmit' checkboxes are checked. The 'Custom Parameters' table has two rows: 'ONLOAD' with type 'String' and value 'rhidmo8\_onload', and 'ONSUBMIT' with type 'String' and value 'rhidmo8\_onsubmit'. There are 'Add', 'Modify...', and 'Remove' buttons on the right.

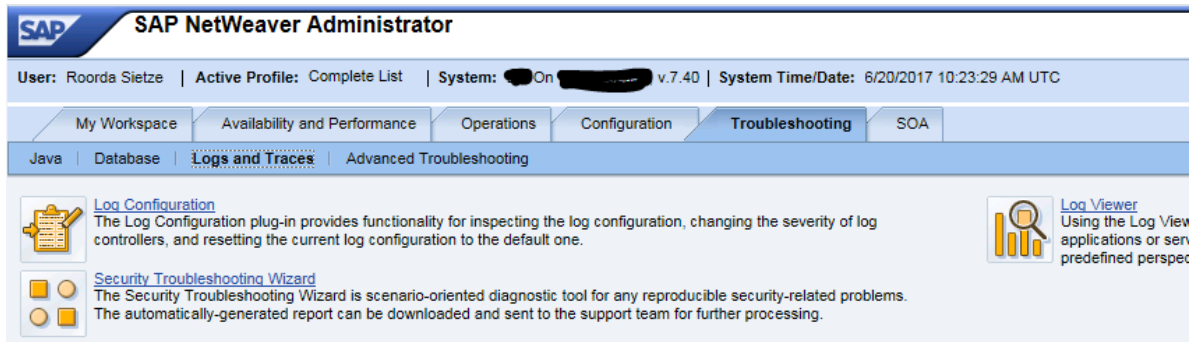
Property	Type	Value
ONLOAD	String	rhidmo8_onload
ONSUBMIT	String	rhidmo8_onsubmit

Use the extension class “de.foxysoft.rhidmo.TaskProcessingDynamic”. The “ONLOAD” and “ONSUBMIT” parameters denote the javascript functions to be called during the corresponding events. These functions must be declared in the same package where the form resides.

## 4 Trouble Shooting

Please check the JAVA AS log in case something goes wrong. If necessary, make sure that the log configuration shows the right amount of messages:

The log viewer can configured and accessed using the “/nwa” application (go to “Troubleshooting” → “Logs and Traces”):



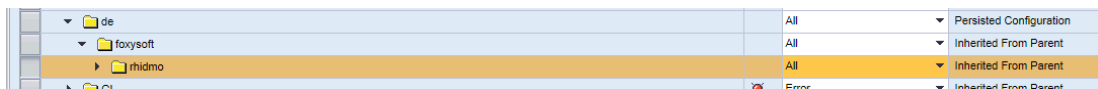
### 4.1 Configuration

By clicking on the link “Log Configuration” you can configure the amount of logging that Rhidmo generates:

1. Select “Tracing Locations”:



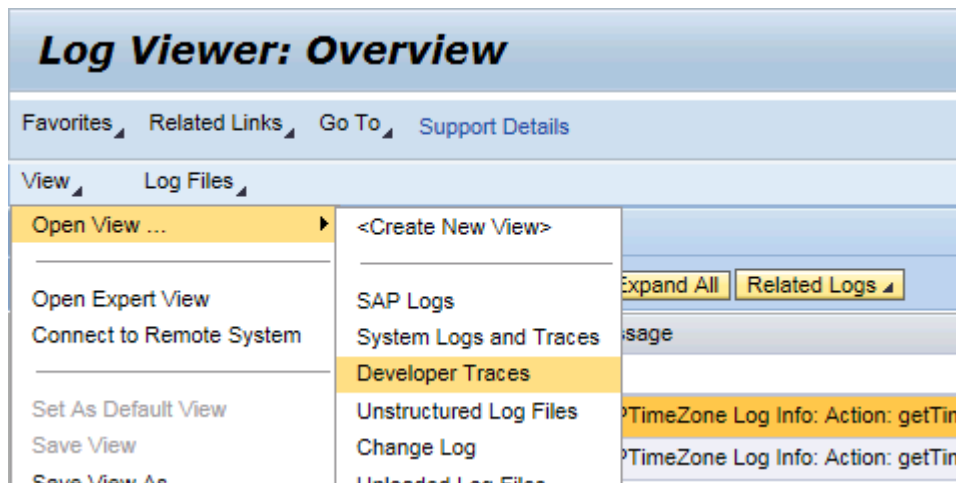
2. Then select “de.foxysoft.rhidmo” in the subtree below:



3. Select the log level you want from the dropdown box to the right and click on the “Copy to Subtree” button to copy this setting to all locations below.

## 4.2 Log Viewer

Click on the “Log Viewer” link to view the logs (Select the View “Developer Traces” to examine the Rhidmo logs):



Example log:

Developer Traces					
Show Advanced Filter					
	Severity	Date	Time	Message	Location
		▼ yyyy-mm-dd			
+	debug	2017-06-20	13:37:08.275	service: Returning [com.sap.idm.extension.api.IdMValue@4637affb]	de.foxysoft.rhidmo.TaskProcessingStatic
+	warning	2017-06-20	13:37:08.256	Attribute [MX_PHONE_PRIMARY] Value []	de.foxysoft.rhidmo.Application
+	warning	2017-06-20	13:37:08.256	Attribute [DISPLAYNAME] Value [Test SBR]	de.foxysoft.rhidmo.Application
+	warning	2017-06-20	13:37:08.256	Attribute [MSKEYVALUE] Value [TESTSBR]	de.foxysoft.rhidmo.Application
+	warning	2017-06-20	13:37:08.256	OnLoad called. Subject MSKEY [23] object MSKEY [25]	de.foxysoft.rhidmo.Application
+	debug	2017-06-20	13:37:08.256	service: f = [org.mozilla.javascript.gen.rhidmo8_onload_23@362f786d]	de.foxysoft.rhidmo.TaskProcessingStatic

## 5 Licenses

This chapter details the licenses of Rhidmo itself and all the software libraries it uses. The definitive text can be found via the provided links; the text here is just a copy for your convenience.

### 5.1 Rhidmo

Rhidmo is licensed under the Apache License, Version 2.0 (the “License”). You can find the license at

<http://www.apache.org/licenses/LICENSE-2.0>

Apache License

Version 2.0, January 2004

<http://www.apache.org/licenses/>

#### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

##### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

You must give any other recipients of the Work or Derivative Works a copy of this License; and

You must cause any modified files to carry prominent notices stating that You changed the files; and

You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## 5.2 ByteBuddy

ByteBuddy is distributed under the Apache 2.0 license. ByteBuddy depends on the ASM library which is distributed under a BSD license.

## 5.3 SLF4J

SLF4J is distributed under the MIT license.

Copyright (c) 2004-2017 QOS.ch

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY,

WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.