5G Exchange

Deliverable 3.4
Software Prototype v3

Revision information: v1 (2017-12-30)

Dissemination level: PU (Public)
Document Information

Editors

Daniel Fritzsche (BISDN), Pierluigi Greto (BISDN), Hagen Woesner (BISDN)

Authors/Contributors

Daniel Fritzsche (BISDN), Pierluigi Greto (BISDN), Ishan Vaishnavi (HWDU), Wint Yi Poe (HWDU), Robert Szabo (ETH), Janos Harmatos (ETH), Akos Recse (ETH), Giovanni Giuliani (HPE), Francesco Tusa (UCL), Ajmal Muhammad (KTH), Paolo Monti (KTH), Andrea Sgambelluri (SSSA), Javier Melian Hernandez (ATOS), Ricardo Figueiredo (RedZinc), Janos Czentye (BME), Balazs Nemeth (BME), Balazs Sonkoly (BME), Jorge Martin Perez (U3CM), Olivier Dugeon (Orange), Karine Sevilla (Orange).

Document History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>2017-12-30</td>
<td>Submission</td>
</tr>
</tbody>
</table>

Coordinator

Robert Szabo
Ericsson Research, Hungary

Partners

Ericsson (Hungary and Italy), ATOS, AUEB, BISDN, BME, Deutsche Telekom, Hewlett Packard Enterprise, Huawei, KTH, Orange, RedZinc, Telecom Italia, Telefonica I+D, Telenor, UC3M, UCL

Project Funding

ICT-2014/H2020-ICT-2014-2, Innovation action
Grant Agreement No. 671636 – 5G Exchange (5GEx)

Legal Disclaimer

The information in this document is provided ‘as is’, and no guarantee or warranty is given that the information is fit for any particular purpose. The above referenced consortium members shall have no liability for damages of any kind including without limitation direct, special, indirect, or consequential damages that may result from the use of these materials subject to any liability which is mandatory due to applicable law.

http://www.5gex.eu
©2017, 5GEx Consortium

Deliverable 3.4
Executive summary

This document briefly summarizes the main information related to the software release of the final 5GEx prototype (P3) of the Multi-domain Orchestrator (MdO).

Moreover, the document provides the hardware/software requirements and the procedure for downloading the final 5GEx MdO P3 artefact.
TABLE OF CONTENTS

1  5GEX MDO P3 REPOSITORIES OF THE COMPONENTS ........................................... 1
2  THE 5GEX MDO P3 ......................................................................................... 4
   2.1 HARDWARE REQUIREMENTS ...................................................................... 4
   2.2 SOFTWARE REQUIREMENTS ...................................................................... 4
   2.3 DOWNLOAD THE MdO P3 ...................................................................... 4

REFERENCES........................................................................................................... 5
1 5GEx MdO P3 repositories of the components

This section refers to the software repositories of the components that are part of the final 5GEx MdO P3. The architecture of P3 in terms of the sub-components and their individual working are explained in D3.7 [1]. D3.7 [1] also explains how to run the Robot experiment in Section 5.

Before an open source release of the final 5GEx MdO P3, we would like to extensively debug and test it in the project sandbox. This is the reason why the final 5GEx MdO P3 software is stored in the project repository, with restricted access.

As soon as the final 5GEx MdO P3 will be considered stable enough, it will be released to the public. Some of the components are already released in the public github page of the project https://github.com/5GExchange.
<table>
<thead>
<tr>
<th>Component name</th>
<th>Current license</th>
<th>Planned License</th>
<th>Current Repo</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>TADS: netphony-topology</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td><a href="https://5gexgit.tmit.bme.hu/ogd/netphony-topology">https://5gexgit.tmit.bme.hu/ogd/netphony-topology</a></td>
<td>No</td>
</tr>
<tr>
<td>TADS: netphony-network-protocols</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td><a href="https://5gexgit.tmit.bme.hu/ogd/netphony-network-protocols">https://5gexgit.tmit.bme.hu/ogd/netphony-network-protocols</a></td>
<td>No</td>
</tr>
<tr>
<td>Dashboard</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>accounting</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dashboard</td>
<td>EUPL</td>
<td>EUPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service-catalogue</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service-selection</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td><a href="https://github.com/5GExchange/Marketplace">https://github.com/5GExchange/Marketplace</a></td>
<td></td>
</tr>
<tr>
<td>SLA-core</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Umaa</td>
<td>EUPL</td>
<td>EUPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vnfs</td>
<td>EUPL</td>
<td>EUPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VNF Store</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td>Repository URL</td>
<td>Available</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------</td>
<td>-------------</td>
<td>----------------</td>
<td>-----------</td>
</tr>
<tr>
<td>NFVO: SV2R Translator</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td><a href="https://5gexgit.tmit.bme.hu/unify/tonova_connector">https://5gexgit.tmit.bme.hu/unify/tonova_connector</a></td>
<td>No</td>
</tr>
<tr>
<td>NFVO: Resource orchestrator (RO)</td>
<td>ESCAPE</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td><a href="https://github.com/5GExchange/escape">https://github.com/5GExchange/escape</a></td>
</tr>
<tr>
<td></td>
<td>Mapping</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td><a href="https://github.com/5GExchange/mapping">https://github.com/5GExchange/mapping</a></td>
</tr>
<tr>
<td></td>
<td>NFFG</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td><a href="https://github.com/5GExchange/nffg">https://github.com/5GExchange/nffg</a></td>
</tr>
<tr>
<td></td>
<td>Virtualizer</td>
<td>Apache v2.0</td>
<td>Apache v2.0</td>
<td><a href="https://github.com/5GExchange/virtualizer">https://github.com/5GExchange/virtualizer</a></td>
</tr>
</tbody>
</table>

Table 1. List of the components in 5GEx MdO P3.
2 The 5GEx MdO P3

2.1 Hardware requirements

The final 5GEx MdO P3 can be run in a virtual machine or in a physical host. The suggested environment requires:

- **Ubuntu Server 16.04** (also other Linux distributions supported by Docker can be used)
- At least **2 GB of RAM**
- At least **16 GB of disk space**

2.2 Software requirements

The required software to be installed in the machine hosting the final 5GEx MdO P3 are:

- **Docker Engine version 1.13.1 or newer**: install it on the test machine following instructions at https://docs.docker.com/engine/installation/
- **Docker Compose version 1.11.1 or newer**: install it on the test machine following instructions at https://docs.docker.com/compose/install/

2.3 Download the MdO P3

The download of final 5GEx MdO P1 can be performed starting from the mdo project available on git-LAB. More specifically, by running the command:

```
git clone https://5gexgit.tmit.bme.hu/5gex/mdo
```

the files of the project will be downloaded.

An “mdo” folder will be created in the local machine, containing all the required files. More specifically:

- the docker-compose file
- the deployment script,
- the set of configuration files related to the reference experiment described in Section 5.1 of D3.7 [1] and
- the VNF descriptors required for the VNF onboarding at the bootstrap of the 5GEx MdO.

Before running the deployment of the MdO, specific configuration steps are required, as presented in the Section 5.1 of D3.7 [1] and in the repository’s README.
References