

Cluster of Cloud related actions



**Novel approaches and technologies for
Cloud resource and service management**

eucloudclusters.wordpress.com/new-approaches-for-infrastructure-services

Cluster membership



- ▶ Started in June 2015
- ▶ 20 actions/projects from H2020-ICT/FP7-ICT/CIP-ICT



Cluster Objective



Forum

for discussing

the current research and innovation challenges

encountered at infrastructure-as-a-service level

and generated by the desire

to improve

the user experiences

and the efficient use of the available resources



Goals



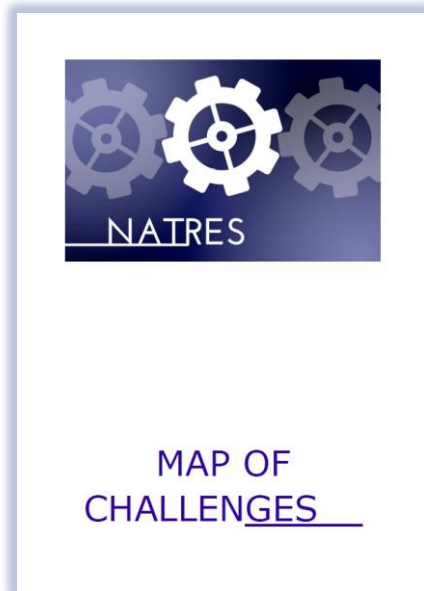
- ✓ define a **map of the challenges**
related to the group topics & approaches /actions
 - ✓ identify **complementarities and synergies**
for collaboration & results adoptions by other actions
 - ✓ identify **new challenges**
to influence the new research agendas by providing recommendations
 - ✓ organisation of **common dissemination actions** like
common publications (e.g. articles, white papers)
trainings and workshops
-



Documents



- ▶ **Map of challenges, Oct 4, 2015**
- ▶ **Recommendations for the WPI8-19, Dec 24, 2015, based on a questionnaire from Nov 2015**
- ▶ **White paper, Apr 15, 2016**



Examples of joint events



- ▶ **MICAS 2015**, 21 Sept 2015, 1 tutorial, 6 action presentations
- ▶ **Booth at NetFuture 2016**, 20 Apr 2016



Examples of joint papers/vols



- ▶ Paper at Closer 2016, 24 Apr 2016, 5 actions
- ▶ Special Issue of Scalable Computing Journal, 11 Oct 2016, 5 actions

On the Next Generations of Infrastructure-as-a-Services

Dana Petcu¹, Maria Fazio², Radu Prodan³, Zhiming Zhao⁴ and Massimiliano Rak⁵

¹Institute e-Austria and Computer Science Department, West University of Timișoara, 4 V. Pârvan, Timișoara, Romania

²Dicieama Department, University of Messina, 98166 Sant Agata, Messina, Italy

³Institute for Computer Science, University of Innsbruck, 21a Technikerstrasse, Innsbruck, Austria

⁴System and Network Engineering, University of Amsterdam, 904 Science Park, Amsterdam, Netherlands

⁵Department of Industrial Engineering and Information, Second University of Naples, 29 Sede di via Roma, Aversa, Italy

Keywords: Infrastructure-as-a-Service, Surveys, Previsions.

Abstract: Following the wide adoption by industry of the cloud computing technologies, we can talk about a second generation of cloud services and products that are currently under design phase. However, it is not yet clear how the third generation of cloud products and services of the next decade will look like, especially at the delivery level of Infrastructure-as-a-Service. In order to answer at least partially to such a challenging question, we initiated a literature overview and two surveys involving the members of a cluster of European research and innovation actions. The results are interpreted in this paper and a set of topics of interest for the third generation are identified.

1 INTRODUCTION

see what the *third generation* of Cloud products will bring out-of-the-box, as well when the user adoption

Scalable Computing: Practice and Experience

Volume 17, Number 4, December 2016

TABLE OF CONTENTS

SPECIAL ISSUE ON NEW APPROACHES FOR INFRASTRUCTURE SERVICES:

Introduction to the Special Issue	iii
SLA-based Secure Cloud Application Development <i>Valentina Casola, Alessandra De Benedictis, Massimiliano Rak, Umberto Villano</i>	271
Impact of Single Parameter Changes on Ceph Cloud Storage Performance <i>Stefan Meyer, John P. Morrison</i>	285
Multi-objective Middleware for Distributed VMI Repositories in Federated Cloud Environment <i>Dragi Kimovski, Nishant Saurabh, Vlado Stankovski, Radu Prodan</i>	299
Architecture of a Scalable Platform for Monitoring Multiple Big Data Frameworks <i>Gabriel Iuhasz, Daniel Pop, Ioan Drăgan</i>	313
Exposing HPC services in the Cloud: the CloudLightning Approach <i>Ioan Drăgan, Teodor-Florin Fortiș, Marian Neagul</i>	323

Annual report from Aug 2016



1. Introduction	3
1.1 Aim.....	3
1.2 Scope	3
1.3 Organisation	3
2. NATRES organisation.....	4
2.1 Initiation	4
2.2 Establishing the topics of collaboration.....	4
2.3 Collaboration support	5
2.4 Participants	5
2.5 Timeline.....	6
2.6 Shared information in virtual space.....	6
2.7 Meeting dates.....	7
3. NATRES public documents	8
3.1 List of public documents	8
3.2 Map of challenges.....	8
3.3 Recommendations for the WP18/19.....	9
3.4 White paper	9
4. NATRES dissemination	11
4.1 List of dissemination venues	11
4.2 Dissemination documents.....	11
5. Lesson learned.....	15
5.1 Organisation	15
5.2 Impact.....	15

Instead conclusions



▶ **Goals**

- ▶ were achieved in the proposed time scale (1.5 year)

▶ **Web site with the documents:**

<https://eucloudclusters.wordpress.com/new-approaches-for-infrastructure-services>

▶ **Future activities**

- ▶ revise the cluster memberships
- ▶ position related to standardization
- ▶ feedback to the commission



▶ **Contacts:**

- ▶ **Dana Petcu**, Dana.Petcu@e-uvt.ro
- ▶ **Maria Tsakali**, Maria.Tsakali@ec.europa.eu

