CumuloNimbo Dissemination Activity
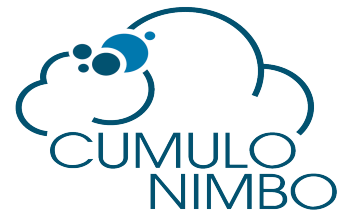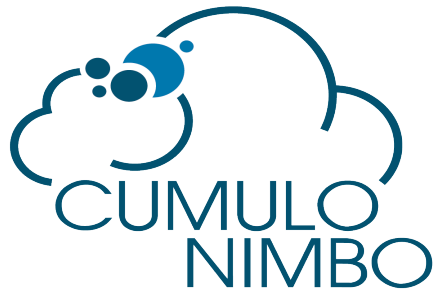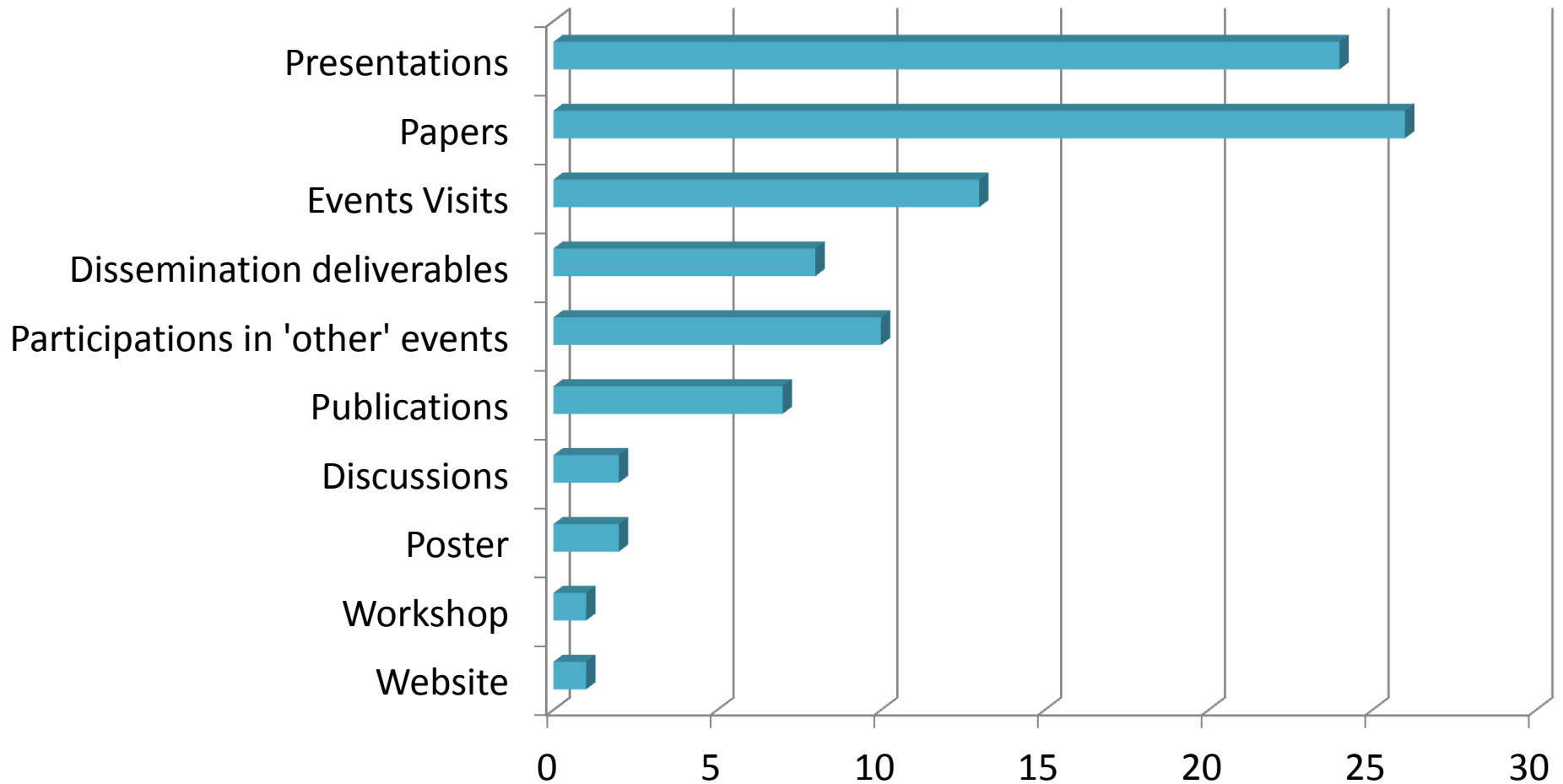
Final Review, Brussels, 27th November 2013

Dissemination Summary

- Any and all material that can be used for communication towards the general public.

- Eight communication, dissemination & Collaboration deliverables

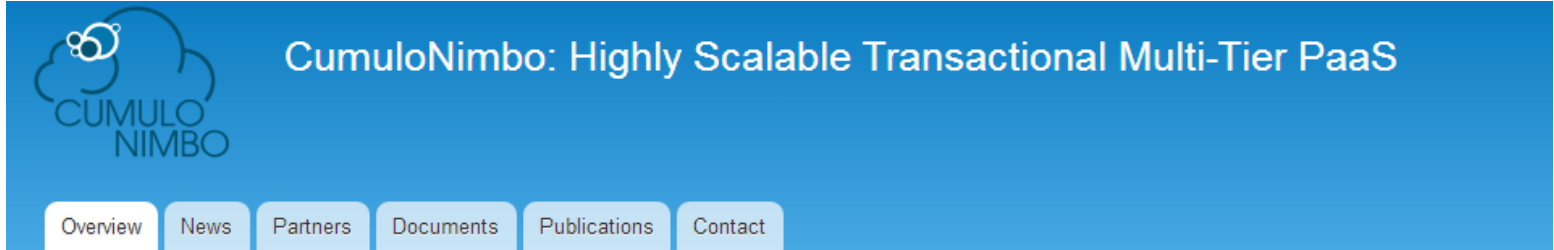- ***Project logo, brand identity and website***

Dissemination: A snapshot

CumuloNimbo Website

CumuloNimbo.eu Visits

CumuloNimbo.eu Visits

CumuloNimbo Posters

CumuloNimbo Factsheet

Dissemination Activities

Dissemination Activities

CumuloNimbo public workshop

Prof. Ricardo Jimenez-Peris has organized a CumuloNimbo workshop at the second EUDAT Conference held on 28th October 2013 in Rome.

In the workshop Prof. Ricardo Jimenez-Peris, Jose Pereira and Kostas Magoutis presented different aspects of the CumuloNimbo project to the Big Data audience in the CumuloNimbo workshop at the second EUDAT Conference held on 28th October 2013 in Rome.
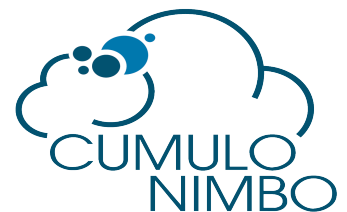
Dissemination Activities

CumuloNimbo booth at ICT 2013 Conference held in Vilnius during 6-8 Nov. 2013

Prof. Ricardo Jimenez-Peris, Ivan Brondino, Prof. Rui Oliveira, Prof. Kostas Magoutis staffed the booth at the event.

- Promotional video about CumuloNimbo made by professional graphic artists.
- Two App games to learn about cloud for the general public available in several tablets.
- Poster about CumuloNimbo made by professional graphic artists.
- Poster about CumuloNimbo startup made by professional graphic artists.
- Leaflet with CumuloNimbo results made by professional graphic artists

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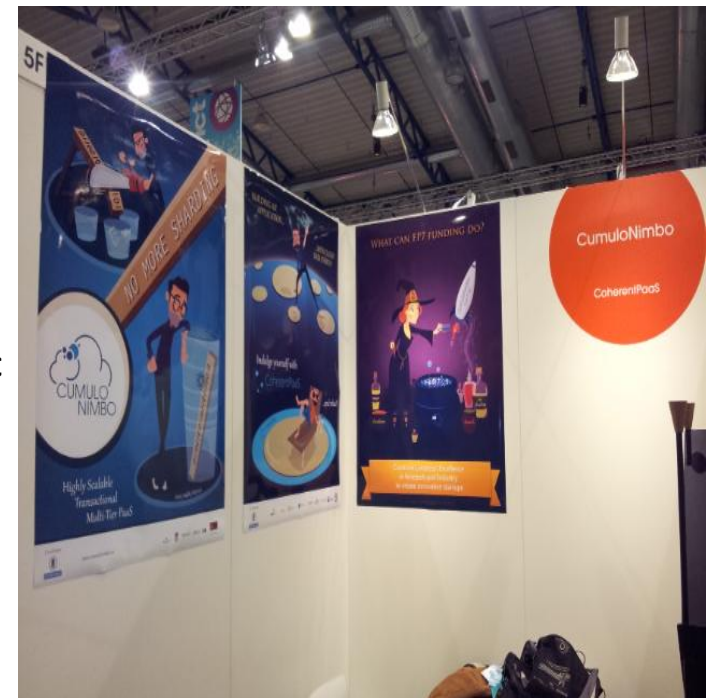
Dissemination Activities

Accepted Papers (25)

- Muhammad Yousuf Ahmad, Bettina Kemme, Ivan Brondino, Marta Patiño-Martínez, Ricardo Jiménez-Peris: Transactional failure recovery for a distributed key-value store. ACM/IFIP/USENIX International Middleware Conference, Beijing (China), December 9-13 2013.
- Yu Jia, Ivan Brondino, Ricardo Jiménez-Peris, Marta Patiño-Martínez, Dianfu Ma: **A multi-resource load balancing algorithm for cloud cache systems**. 28th Symposium on Applied Computing (SAC´13). , Coimbra (Portugal), March 18-22 2013. pp. 463-470.
- L. Schubert, K. Jeffery, B. Neidecker-Lutz (eds). A Roadmap for Advanced Cloud Technologies under H2020. December 2012. Ricardo Jimenez-Peris one of the experts contributing to the document. http://cordis.europa.eu/fp7/ict/ssai/docs/cloud-expert-group/roadmap-dec2012-vfinal.pdf
- Laura Moore, Kathryn Bean and Tariq Ellahi, A Coordinated Reactive and Proactive **Approach to Auto-scaling**, 4th International Conference on Cloud Computing, Grids and Virtualization, May 27th – June 1st 2013, Valencia, Spain **(Best paper award)**
- "Lock-free Transactional Support for Distributed Data Stores", SOSP 2011. [Poster]
- "Lock-free Transactional Support for Large-scale Storage Systems", HotDep 2011
- "A critique to snapshot isolation", Eurosys, pp. 155-168, April 2012
- "Durability with BookKeeper." ACM SIGOPS OSR 47.1 (2013)
- "Lock-free Transactional Support for Distributed Data Stores", ICDE 2014

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Dissemination Activities

Accepted Papers (cont)

- Junqueira, Flavio P., Ivan Kelly, and Benjamin Reed. "**Durability with BookKeeper**." ACM SIGOPS Operating Systems Review 47.1 (2013): 9-15.
- Maria Chalkiadaki and Kostas Magoutis, "Managing service performance in NoSQL distributed storage systems", in Proceedings of the 7th Middleware for Next-Generation Computing (MW4NG) Workshop of the 13th International Middleware Conference 2012, Montreal, Canada, December 3-7, 2012.
- Panagiotis Garefalakis, Kostas Magoutis: Improving Datacenter Operations Management Using Wireless Sensor Networks, in Proceedings of IEEE International Conference on Internet of Things (iThings 2012), Besancon, France, November 20-23, 2012.
- Panagiotis Garefalakis, Panagiotis Papadopoulos, Ioannis Manousakis, and Kostas Magoutis, "Strengthening Consistency in the Cassandra Distributed Key-Value Store", in Proceedings of 12th IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS 2012), Florence, Italy, June 4-6, 2013
- Tyche: An efficient, Ethernet-based protocol for networked storage. Pilar Gonzalez-Ferez and Angelos Bilas. Submitted to IPDPS'2014.
- Kamal Zellag, Bettina Kemme: How consistent is your cloud application?
  ACM Symposium on Cloud Computing, SOCC '12, San Jose, CA, USA, October
  14-17, 2012.
- Kamal Zellag, Bettina Kemme: ConsAD: **a real-time consistency anomalies** detector. ACM SIGMOD International Conference on Management of Data, SIGMOD 2012, Scottsdale, AZ, USA, May 20-24, 2012: 641-644 (demo paper)
- Amir Yahyavi, Kévin Huguenin, Julien Gascon-Samson, Joerg Kienzle and Bettina Kemme: Watchmen: Scalable Cheat-Resistant Support for Distributed Multi-Player Online Games. IEEE International Conference on Distributed Computing Systems (ICDCS), Philadelphia, USA, July 8-11, 2013.

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Dissemination Activities

Accepted Papers (Cont)

- L. Beernaert, M. Matos, R. Vilaça, and R. Oliveira. Automatic elasticity in OpenStack. In Proceed- ings of Workshop on Secure and Dependable Middleware for Cloud Monitoring and Management (with Middleware 2012), Montreal, December 2012. ACM.
- F. Maia, M. Matos, R. Vilaça, J. Pereira, R. Oliveira, and E. Rivi`ere. DataFlasks: an epidemic dependable key-value substrate. In Proceedings of the 3rd International Workshop on **Dependability of Clouds, Data Centers and Virtual Computing Environments** (with DSN 2013), Budapest, June 2013. IEEE.
- Nunes, R. Oliveira, and J. Pereira. Ajitts: Adaptive just-in-time transaction scheduling. In Proceedings of the 13th IFIP Distributed Applications and Interoperable Systems (DAIS), LNCS, Florence, June 2013. IFIP, Springer.
- R. Vilaça, F. Cruz, J. Pereira, and R. Oliveira. An effective scalable SQL engine for NoSQL databases. In Proceedings of the 13th IFIP Distributed Applications and Interoperable Systems (DAIS), LNCS, Florence, June 2013. IFIP, Springer.
- F. Maia, M. Matos, E. Rivi`ere, and R. Oliveira. Slicing as a distributed systems primitive. In Proceedings of the 6th Latin-American Symposium on Dependable Computing (LADC), Rio de Janeiro, April 2013.
- F. Cruz, F. Maia, M. Matos, R. Oliveira, J. Paulo, J. Pereira, and R. Vilaça. Met: Workload aware elasticity for nosql. In Proceedings of the 8th ACM European Conference on Computer Systems (EuroSys), Prague, April 2013. ACM
- L. Beernaert, P. Gomes, M. Matos, R. Vilaça, and R. Oliveira. Evaluating Cassandra as a manager of large file sets. In Proceedings of the 3rd International Workshop on Cloud Data and Platforms (with EuroSys 2013), Prague, April 2013. ACM.
- F. Coelho and F. Cruz and J. Pereira and R. Vilaça and R. Oliveira. pH1: middleware transaccional para NoSQL. In Proceedings of INFORUM - Simpósio de Informática, Évora,September 2013.

Submitted Papers (1)

- Ricardo Jimenez-Peris, Marta Patiño-Martínez, Ivan Brondino, Jose Pereira, Ricardo Vilaçaa, Francisco Cruz, Rui Oliveira, Bettina Kemme, Yousuf Ahmad. CumuloNimbo: A Cloud Platform as a Service with Ultra-Scalable Transactional Processing. Submitted to VLDB 2014.
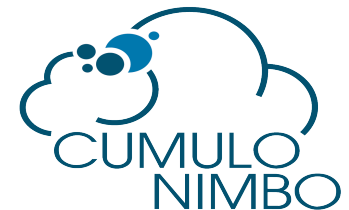
Dissemination Activities

Presentations/Talks (24)

- Presentation by Panagiotis Garefalakis of "Strengthening Consistency in the Cassandra Distributed Key-Value Store", in 12th IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS 2012), June 2012.
- Invited lecture, Chalmers University of Technology, Angelos Bilas.   NAND-Flash in storage systems. 14 May 2013.
- Invited Talk, Angelos Bilas. Server Storage I/O: How Much I/O and How To Get There, Intel ERIC 2012, Barcelona, Spain, October 22-23, 2012.
- Presentation by Pilar Gonzalez-Ferez. Tyche: An efficient, Ethernet-based protocol for networked storage. Scalus workshop, Hamburg, Germany, Oct 10-11 2013.
- Prof. Ricardo Jimenez-Peris presented the talk titled "**CumuloNimbo: Scalable and Transparent Cloud Transactional Data Management**" at the **eChallenges conference in Lisbon** on 19th October 2013 in the workshop on "Storage Clouds for the Future Internet".
- BookKeeper (incl. HDFS HA) & OMID presented at Hadoop Summit EU 2013
- Prof. Ricardo Jimenez-Peris and Marta Patiño visited Telefónica and presented CumuloNimbo for exploitation to several Telefonica heads of units.
- "Durability with BookKeeper", Keynote speech, LADIS 2012
- "Omid: Transactional Support for HBase", Hadoop User Group (HUG), Feb 2012
- BookKeeper (incl. HDFS HA) & OMID presented at Hadoop Summit EU 2013
- Yahoo's Flavio Junqueira presented BookKeeper, including our work on HDFS High availability at Hadoop Summit EU 2013 Yahoo's Daniel Gomez Ferro presented OMID at Hadoop Summit EU 2013.
- Discussions and collaboration with Fujitsu Technology Solutions, Munich, Germany on scaling storage in the data-center. Dec 2012 – present

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Dissemination Activities

Presentations/Talks (cont)

- Discussions with Samsung Memory Division, Korea, on use of NVM in the datacenter. July 2013 – present.
- Presentation of "Managing service performance in NoSQL distributed storage systems" paper in 7th Middleware for Next-Generation Computing (MW4NG) Workshop by Kostas Magoutis, December 4, 2012
- Presentation by Panagiotis Garefalakis of "Improving Datacenter Operations Management Using Wireless Sensor Networks", in IEEE International Conference on Internet of Things (iThings 2012), November 22, 2013.
- **McGill** presented the CumuloNimbo project at a **site visit to NetApp**, California, in October 2012, with two focus points: consistency and elasticiy of the data block tier.
- McGill presented the CumuloNimbo project at a **site visit to SAP, Montreal**, in August 2013 (overview talk).
- McGill presented the CumuloNimbo project at the Dagstuhl Seminar: Consistency in Distributed Systems. Focus point was consistency.
- U. Minho, Rui Oliveira and José Pereira, presented the CumuloNimbo project to Sapo, Lisbon, Portugal, 15th May 2013.
- **U. Minho**, Rui Oliveira, presented the **CumuloNimbo project to EDP**, Lisbon, Portugal, 19th June 2013.
- U. Minho, Rui Oliveira, presented the CumuloNimbo project to Galp Energia, Lisbon, Portugal, 23rd July, 2013.
- U. Minho, Rui Oliveira, presented the CumuloNimbo project at University of Neuchatel, Switzerland, 25th July, 2013.
- Craig Sheridan, CumuloNimbo presentation at ICT 2013 Conference held in Vilnius, European Union
- Craig Sheridan, CloudScape V, European Union, 27-28th February 2013

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Dissemination Activities
Participation in other events (10)

- Prof. Ricardo Jimenez-Peris participated in the **CloudExpo at Silicon Valley** 5-8 Nov. 2012 and disseminated CumuloNimbo results among several IaaS, PaaS and NoSQL vendors present in the exhibition floor.
- Prof. Ricardo Jimenez-Peris participated in the Dagsthul seminar on Consistency in distributed systems and disseminated the CumuloNimbo results among the workshop seminar participants.
- Laura Moore, Kathryn Bean and Tariq Ellahi, **Transforming Reactive Auto-scaling to Proactive Auto-Scaling**, 3rd International **Workshop on Cloud Data and Platforms (CloudDP'13)**, April 14th – 16th 2013, Prague, Czech Republic.
- Prof. Ricardo Jimenez-Peris presented the "A multi-resource load balancing algorithm for cloud cache systems." paper at 28th Symposium on Applied Computing (SAC´13). , Coimbra (Portugal), March 19th 2013.
- Prof. Bettina Kemme has been the General Chair of the ACM/USENIX/IFIP Int. Middleware Conference, held in Montreal, December 2012.
- Prof. Bettina Kemme has been co-organizer of the Dagstuhl seminar on "Consistency in distributed systems".
- Craig Sheridan, From FP7 to Horizon 2020 seminar, Scotland, 20th June 2013
- Craig Sheridan, European Union Horizon 2020 seminar, Scotland, 25th January 2013
- Craig Sheridan, Future Internet Assembly, European Union, 8-10th May 2013
- Ger Burns, **Cloud Expo Europe**, European Union, 29-30th January 2013

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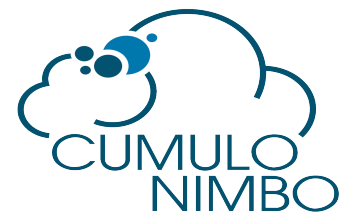
Dissemination Activities

Visits

- Prof. Bettina Kemme visited UPM and work with Prof. Marta Patiño and Ricardo Jimenez on 6-9th May 2013 on the VLDB paper submitted this year.

- Prof. Ricardo Jimenez-Peris visited QuartetFS on 21st May 2013 in Paris and presented CumuloNimbo results.

- Prof. Ricardo Jimenez-Peris visited Neurocom on 1st June in Athens to establish a cooperation on a M2M platform leveraging CumuloNimbo results to be exploited by the startup to be created.

- Prof. Rui Oliveira and Jose Pereira visited UPM on 23-24 July 2013 for discussing the exploitation of CumuloNimbo results and presenting the targeted commercial offering to a large potential client.

- Prof. Ricardo Jimenez-Peris visited mCentric on 31st July 2013 for discussing exploitation of CumuloNimbo results.

- Prof. Ricardo Jimenez-Peris and Ivan Brondino visited Minho Univ. on 24-25 Sept. 2013 to continue with the exploitation of CumuloNimbo results.
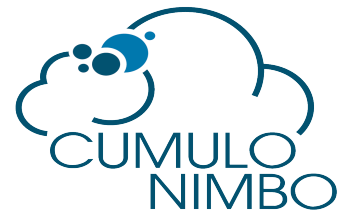
Dissemination Activities

Event organisation

- Prof. Rui Oliveira has been the general chair of the Symposium on Reliable Distributed Systems (SRDS) held in Braga.

CumuloNimbo Achievements Sheet.

- UPM has prepared the achievement sheet about the project and submitted to the PO for its publication at the EC web site and disseminating it in EU concertation events.

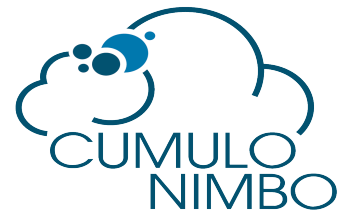CUMULO NIMBO

Dissemination Activities

Opensource

- Yahoo has continued to maintain BookKeeper open source project and HDFS HA component in the Hadoop project. BookKeeper now has contributors from 3 major industry players, Yahoo, Twitter and Huawei. http://zookeeper.apache.org/bookkeeper

- Yahoo has continued to maintain OMID. https://github.com/yahoo/omid

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Collaboration with ICT IoS Projects and FIA

Collaboration with ICT Projects and FIA

- UPM has cooperated with the FP7 4CaaSt project and has integrated CumuloNimbo into the 4CaaSt framework and it has been demonstrated at the final review of 4CaaSt in Brussels during 24-25th October 2013.

- UPM has cooperated with the FP7 MASSIF project and integrated CumuloNimbo into the MASSIF SIEM as event store.
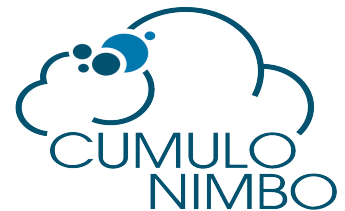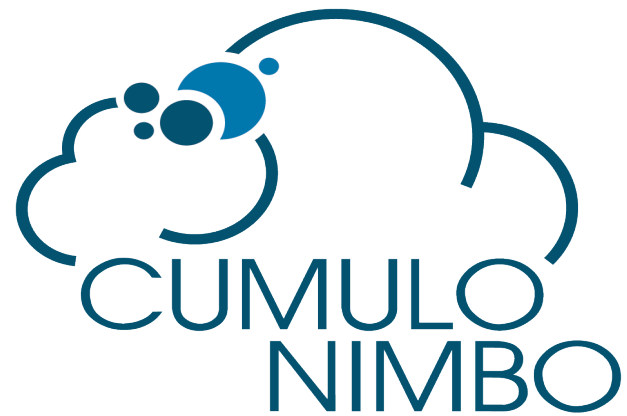
Any questions?

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