Call for Contributions
1. Inform the Chair: with the Title of your Contribution
2. Submission URL:
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=CLOUD+COMPUTING+2019+Special
Please select Track Preference as **DLT**

Special track

DLT: Distributed Ledger Technology

Chairs and Coordinators

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along with

CLOUD COMPUTING 2019, The Tenth International Conference on Cloud Computing, GRIDs, and Virtualization

http://www.iaria.org/conferences2019/CLOUDCOMPUTING19.html

Over the last decade cloud computing has enabled a near complete transformation of the IT landscape. The initial hesitation of utilizing public cloud infrastructure has given way for the ability to perform horizontal scaling securely and for a relatively low cost, compared to self-hosted dedicated hardware. As new software is created, it increasingly is designed as cloud-native solutions that can reap the benefits of the cloud. Monolithic designs are giving way for microservices, serverless, and unikernel designs, whose aim is to improve security, scaling, and cost effectiveness further.

Looking towards the coming decade, the transformation will likely not stop here and the new paradigm is already forming. Distributed clouds enabled by Distributed Ledger Technology (DLT), such as the blockchain, will enable the construction of decentralised applications (DApps) and distributed platforms. Distributed clouds are implemented through a trustless consensus architecture for storing transactions, evaluating smart contracts, or executing software. The guaranteed immutability and the distributed resources of DLT offers new and improved measures for enhancing security. Perhaps most importantly, DLT offers customers a shift away from proprietary centralized solutions offered by current Cloud Service Providers (CSP). The proprietary CSP solutions are often never standardized and this means an implementation is often locked-in to the CSP architecture. This may in the long-run result in a negative cost consideration, but most importantly it hinders multi-cloud solutions that would be able to cope with the effect of a CSP service outage.

As always when a new technology is introduced it offers researchers a new object to study. DLT is neither mature nor void of problems, and this should make the problem even more interesting to study. The application of distributed clouds is expected to grow over the coming decade as the fees for performing transactions fall and latency is reduced. The 3rd generation blockchain (or DLT) is changing how consensus is achieved by moving away from the resource costly Proof of Work (PoW) towards a (delegated) Proof of Stake consensus model, but also some completely new algorithms have been proposed. The first 2.5/3rd generation implementations have

already shown the validity of achieving the aims. As an example, Dash implemented a hybrid consensus model, that offers a 2-3s transaction latency for receiver validation, mitigating double-spend flaws in the network, and a transaction fee structure that enable micro-transactions (fee is currently ~ 0.2-0.3 USD). This development can be expected to continue as the core focus for DLT developers are currently to improve scalability while reducing transaction fees further, and to enable cross-chain transfers of crypto-currency value (i.e., the ability for chains to communicate autonomously).

Topics include, but not limited to:

- The software layer stack of the distributed cloud (incl. Distributed DNS, IPFS, Golem, and Streamr, but also the distributed cloud architecture)
- Distributed platform marketplace
- Smart Contract design (SC)
- Security and testing of SC
- DApp architecture
- Security and testing of DApps
- Service provisioning perspective of DApps (QoS)
- Utility DApps (e.g., forensic applications)
- Web 3.0
- Edge and Fog Computing utilizing DLT

Contribution Types

- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Important Datelines

- Inform the Chair: As soon as you decided to contribute
- Submission: ~~March 10, 2019~~ March 23, 2019
- Notification: ~~March 30, 2019~~ April 8, 2019
- Registration: ~~April 8, 2019~~ April 14, 2019
- Camera-ready: ~~April 8, 2019~~ April 14, 2019

Note: These deadlines are somewhat flexible, providing arrangements are made ahead of time with the chair.

Paper Format
- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules: http://www.iaria.org/editorialrules.html

Publications
- Extended versions of selected papers will be published in IARIA Journals: http://www.iariajournals.org
- Print proceedings will be available via Curran Associates, Inc.: http://www.proceedings.com/9769.html
- Articles will be archived in the free access ThinkMind Digital Library: http://www.thinkmind.org

Paper Submission
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Registration
- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at http://www.iaria.org/registration.html

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