WP3 : Decentralized Reconfigurations

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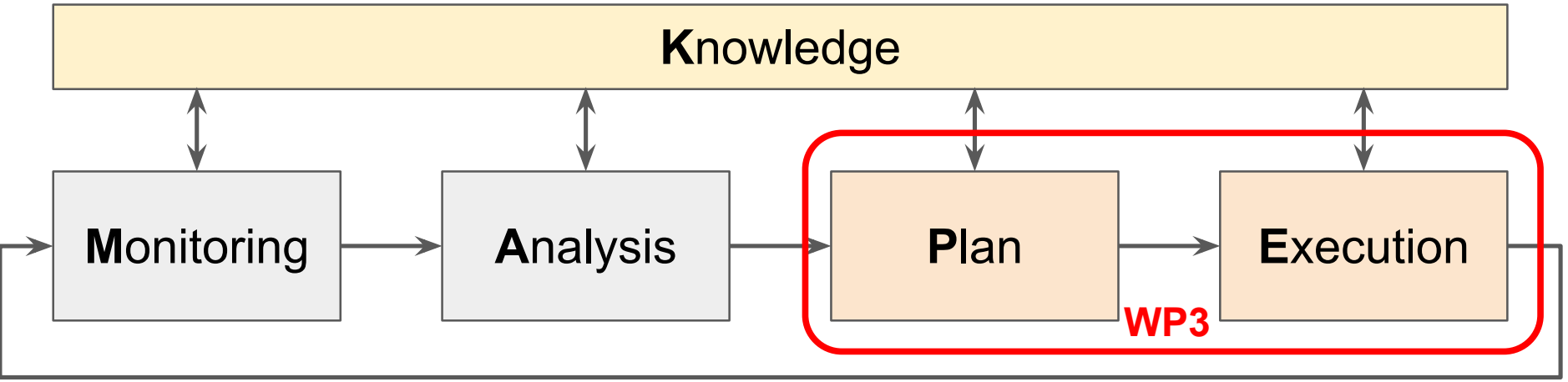
Positioning



Tasks

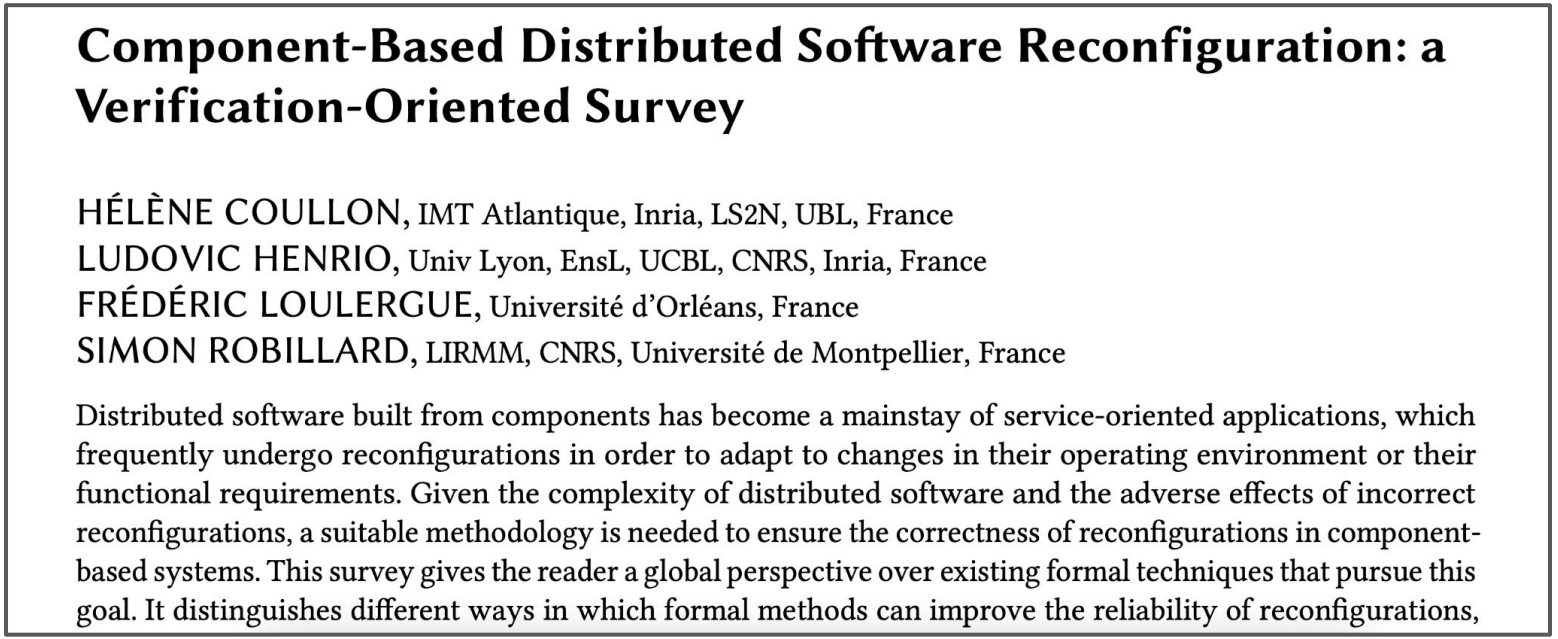
- Task T3.1 - State-of-the-art on decentralized reconfiguration languages.
- Task T3.2 - Design of a new decentralized reconfiguration language.
- Task T3.3 - Inference and planification of reconfiguration programs.

Livrables

- Deliverable D3.1 - Survey on decentralized reconfiguration
- Deliverable D3.2 - Specification of a new decentralized reconfiguration language and its formal semantics
- Deliverable D3.3 - Specification of the reconfiguration inference mechanism

Deliverable D3.1 - Survey on decentralized reconfiguration

- **Hélène Coullon,** Ludovic Henrio, Frédéric Loulergue, Simon Robillard. *Component-Based Distributed Software Reconfiguration: a Verification-Oriented Survey.* ACM Computing Surveys, 2024, 56 (1), pp.1-37



Component-Based Distributed Software Reconfiguration: a Verification-Oriented Survey

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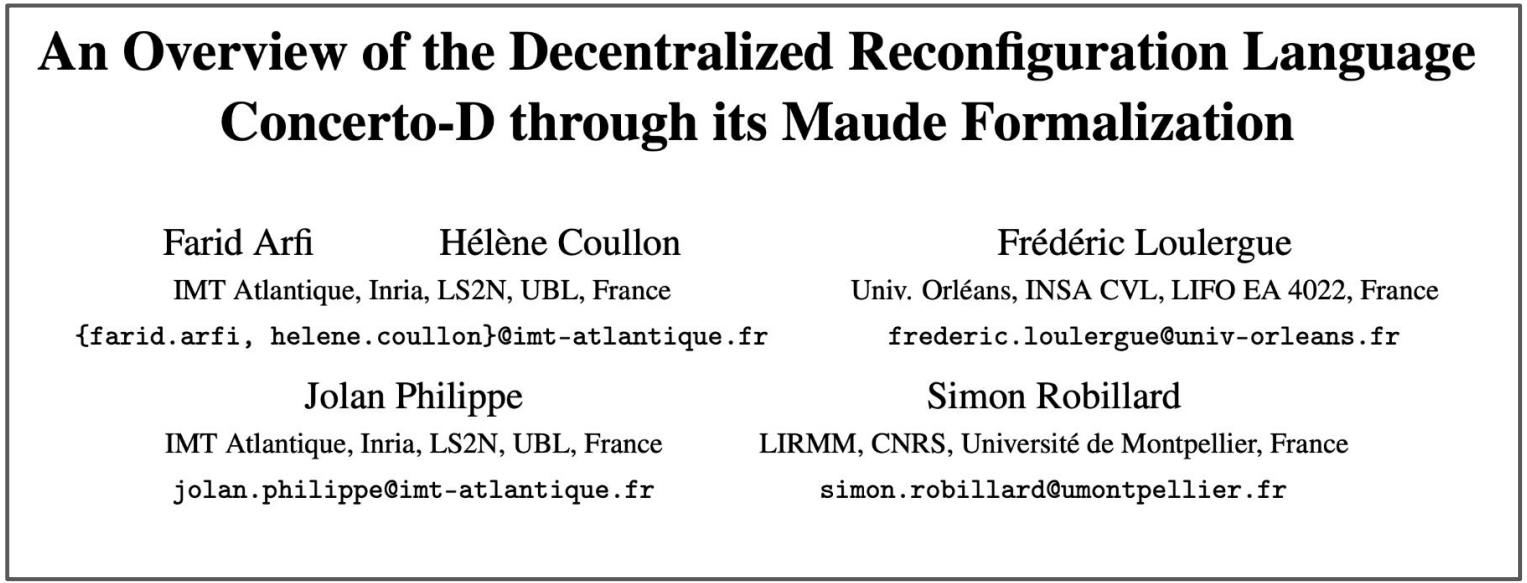
Distributed software built from components has become a mainstay of service-oriented applications, which frequently undergo reconfigurations in order to adapt to changes in their operating environment or their functional requirements. Given the complexity of distributed software and the adverse effects of incorrect reconfigurations, a suitable methodology is needed to ensure the correctness of reconfigurations in component-based systems. This survey gives the reader a global perspective over existing formal techniques that pursue this goal. It distinguishes different ways in which formal methods can improve the reliability of reconfigurations,

Deliverable D3.2 - Specification of a new decentralized reconfiguration language and its formal semantics

- Farid Arfi, **Hélène Coullon**, Frédéric Loulergue, **Jolan Philippe**, Simon Robillard. *An Overview of the Decentralized Reconfiguration Language Concerto-D through its Maude Formalization.* **ICE 2024**: 17th Interaction and Concurrency Experience, Jun 2024, Groningen, Netherlands. pp.1-1



An Overview of the Decentralized Reconfiguration Language Concerto-D through its Maude Formalization

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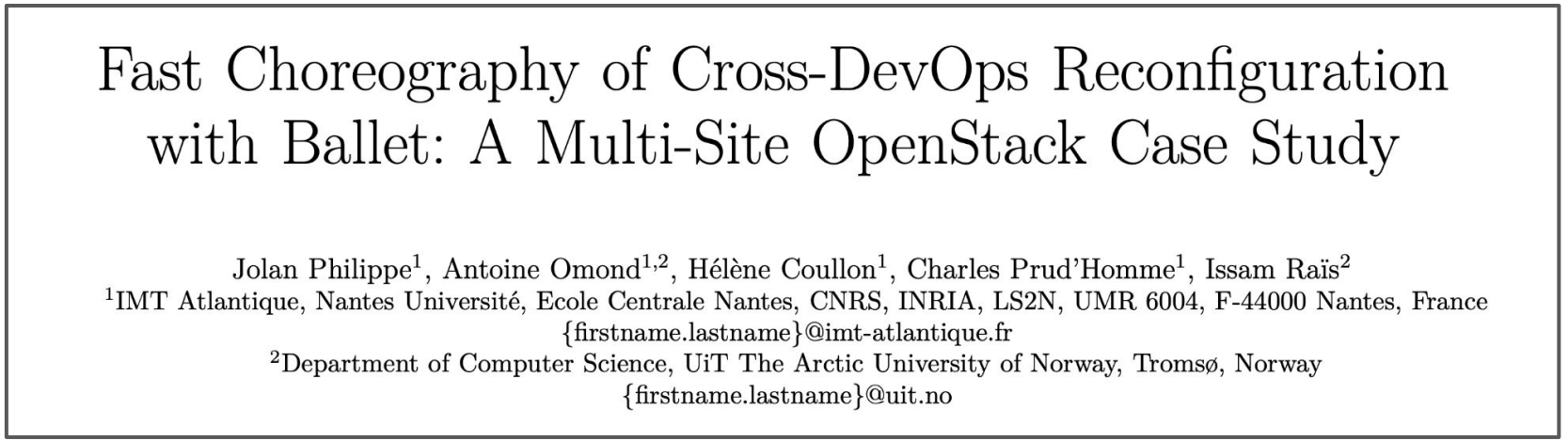
Deliverable D3.3 - Specification of the reconfiguration inference mechanism

- **Jolan Philippe,** Antoine Omond, **Hélène Coullon, Charles Prud'Homme,** Issam Raïs. *Fast Choreography of Cross-DevOps Reconfiguration with Ballet: A Multi-Site OpenStack Case Study.* **SANER 2024**: IEEE International Conference on Software Analysis, Evolution and Reengineering, Mar 2024, Rovaniemi



Fast Choreography of Cross-DevOps Reconfiguration with Ballet: A Multi-Site OpenStack Case Study

Jolan Philippe[1], Antoine Omond[1,2], Hélène Coullon[1], Charles Prud'Homme[1], Issam Raïs[2]
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About GDR SciLog

- **GT SyLA - Systèmes Logiciels Adaptables**
  at GDR SciLog 2026-2030 (formerly GPL)

- **Défi ADDYCT - ADaptation DYnamtique et ConTinue**

1 ADAPTATION CONTINUE

Nom proposé : ADDYCT (ADaptation DYnamique et ConTinue)

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Titre complet : Adaptation continue