

GOALS

This demo shows how autonomic and distributed management can work in a real environment, with the features of bootstrapping and discovery (Hide & Seek Discovery) and Autonomous and Distributed Decisions.

The setup consists on 25 wired network elements in a virtualized environment, integrated in a PT INOVAÇÃO board.

Resorting to the Hide & Seek Discovery process, the elements exchange information with the connected neighbors, which in turn, will allow them to make autonomous decisions based on the knowledge and learning process. The decision system acts based on the learning of the experience of the past attempts to establish paths.

The demo consists on observing the discovery process, followed by the setup of paths with specific reservations.

PUBLICATIONS

- L. Guardalben, P. Salvador, S. Sargento, V. Mirones, "A Cooperative Hide and Seek Discovery over In Network Management", IEEE/IFIP, Network Operations and Management Symposium Workshops (NOMS Wksps), 2010.
- L. Guardalben, T. Gomes, A. Pinho, P. Salvador, S. Sargento, "Nodes Discovery in the In-Network Management Communication Framework", Proc ICST Conf. on Mobile Networks and Management (MONAMI), Aveiro, Portugal, Vol. 3, pp. 1 - 14, September, 2011.

DEMOS

- Panorama Workshop, 2011, Aveiro
- Monami 2011, Aveiro

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AUTONOMIC AND DISTRIBUTED MANAGEMENT

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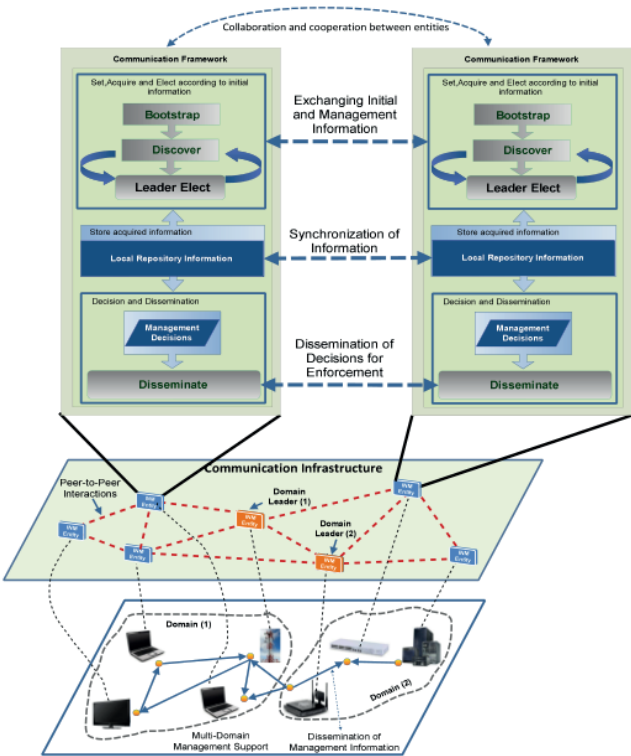


INTRODUCTION

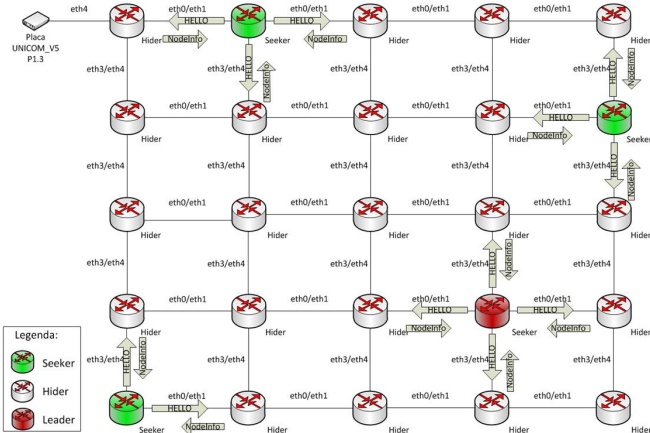
The main goal of this area is to ensure a framework for autonomic and distributed management.

This framework supports a communication system that provides the dissemination of management information between network nodes with distributed and autonomic management.

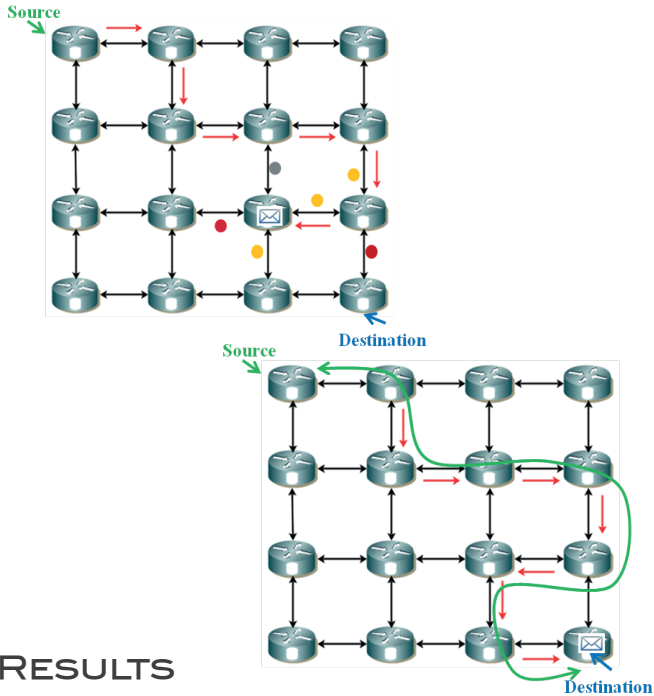
The decision system uses a modified Reinforcement Learning algorithm (SARSA), which is implemented on each network agent to perform path reservation in a distributed way and with incomplete information.



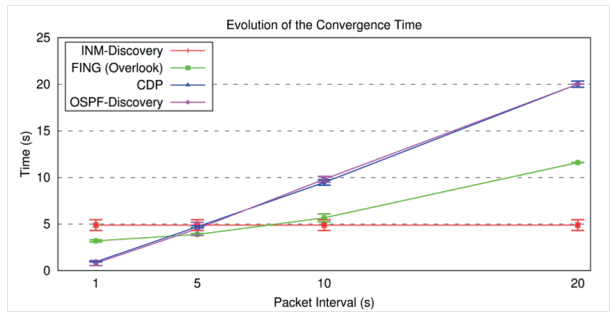
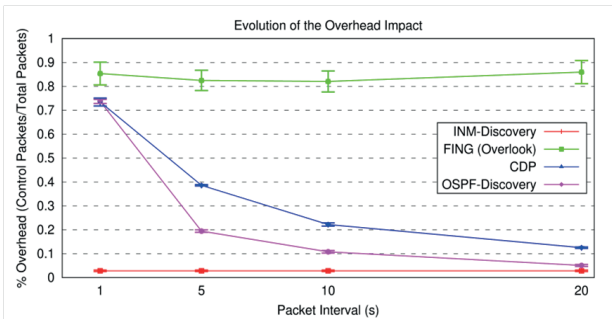
HIDE & SEEK



AUTONOMOUS DECISION SYSTEM



RESULTS



RESULTS

