Keynote: Autonomic Networking

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Abstract

Next generation networks are being realised by the convergence of wired and wireless converged networks. This has the potential to provide seamless services to the end user, providing freedom of movement between metropolitan/enterprise and indoor/outdoor coverage while maintaining continuity of applications experience. However, this requires significant changes to existing wired and wireless network management systems. These changes balance innovative cognitive networking with a call for the “Calm Technology” of Ubiquitous Computing. The result is an experiential architecture that can learn and reason to provide mechanisms that enable a user to accomplish his or her tasks without regard to device, media, and/or technology. This talk will provide new insight into the challenges of such architectures, and describe a novel autonomic architecture that can dynamically synthesise knowledge about the context of its users, the environment, and the capabilities and constraints placed on the network at any given time in order to dynamically adapt its functionality to that which is required. Several different use cases, including traditional networking as well as cognitive radio, will be examined. This talk will conclude with a summary of the standardisation efforts being undertaken in the Autonomic Communications Forum, and how these works will provide a solid foundation for interoperability.

Biography

John Strassner is a Motorola Fellow and Vice President of Autonomic Networking at Motorola Research Labs, where he is responsible for directing Motorola's efforts in autonomic systems, policy management, and knowledge engineering.

Previously, John was the Chief Strategy Officer for Intelliden and a former Cisco Fellow. John invented DEN (Directory Enabled Networks) and DEN-ng as a new paradigm for managing and provisioning networks and networked applications.

John is the Chairman of the Autonomic Communication Forum, and the past chair of the TMF's NGOSS metamodel, policy, and Shared Information and Data modeling work group. He has authored several books (including Directory Enabled Networks and Policy Based Network Management), contributed chapters for four other books, and has over 175 refereed conference and journal publications. John is a TMF Distinguished Fellow, a member of the TMF Advisory Board, a member of the Industry Advisory Board of DePaul University, and the Chair of the Industry Advisory Board of the University of California Davis. John is also an Associate Professor for the Waterford Institute of Technology in Waterford, Ireland.