

NICTA Adaptation Engine

Autonomic system surety
for complex service environments



The Problem

Modern, integrated computer systems are typically built using a service-oriented architecture (SOA). They consist of a collection of software services to ensure the on-demand delivery of information within the organisation or to customers.

Because demands on systems can be unpredictable, the performance of some services can degrade or even fail outright. At best this frustrates everyone, from customers to management and systems administrators. At worst it can be disastrous, causing political or brand embarrassment and/or a mass exodus of customers.

The Solution

A range of technologies already exist to provide system monitoring and alert you when things fail. This is fine if you have the time to wait for your systems engineers to trace the problem and re-boot the right servers.

But organisations that need to provide continuous service surety in the face of changing demand in real-time need something stronger.

They need an autonomic 'nervous system' to plug into their existing environment, sense the performance problems before a disaster arises, and adapt in real-time to the ongoing changes in load. End-users of the services need not notice anything except consistent service levels.

The NICTA Adaptation Engine provides this plug-in which is an autonomic nervous system for SOA environments. It is applied non-intrusively and works at the boundaries of integrated services, so no radical alterations to existing systems or their integration points are required.



Using the NICTA Adaptation Engine

Our technology is an advanced, pre-commercial prototype seeking trial partners. To demonstrate the power of our solution, we'll simulate your systems in our lab and show you their behaviour both with and without the use of the NICTA Adaptation Engine. We will do this at no cost and no risk, and in return for your support and feedback, our first validation customers will receive privileged terms for continued use of the technology, should they decide to deploy the Adaptation Engine in their production environment.

From imagination to impact



ATP Research Laboratory and Executive Offices

Level 5, 13 Garden Street
 Australian Technology Park
 Eveleigh NSW 2015
 Locked Bag 9013
 Alexandria NSW 1435
 Tel: +61 2 9376 2000
 Fax: +61 2 9376 2300

CRL - Canberra Research Laboratory

Tower A, 7 London Circuit
 Canberra City ACT 2601
 Tel: +61 2 6267 6200

VRL - Victoria Research Laboratory

Lvl 2 / Bldg 193 (Dept. of Electrical and Electronic Engineering)
 The University of Melbourne
 VIC 3010
 Tel: +61 3 8344 4489

NRL - Neville Roach Laboratory

Level 4, 223 Anzac Parade
 Kensington NSW 2052
 Tel: +61 2 8306 0400

University of Sydney Facility (USyd)

School of IT Building, J12
 1 Cleveland Street
 University of Sydney NSW 2006
 Tel: +61 2 8374 5509

QRL - Queensland Research Laboratory

Level 5, Axon Building (47)
 Staff House Road
 St Lucia QLD 4072
 Tel: +61 7 3300 8400

AF - Adelaide Facility

Innovation House
 First Avenue
 Mawson Lakes SA 5095
 Tel: +61 8 8302 3928

NICTA

NICTA is Australia's Information and Communications Technology (ICT) Research Centre of Excellence and the largest organisation in Australia dedicated to ICT research. NICTA drives innovation through high-quality research, research training and technology transfer.





Our researchers are located in five laboratories located in four cities around Australia: Melbourne, Sydney, Canberra and Brisbane. Working in specialised teams, they are focused on a series of specific research themes and business areas.

Our work as a world-class research institute and Centre of Excellence in science and innovation brings together many of Australia's and the world's top ICT researchers. NICTA provides them with the facilities and support they require, making our vision a reality.

NICTA's unique approach fosters and develops ICT research. We work closely with both industry and other research institutions to solve problems and make breakthroughs in ICT with real impact.

NICTA's focus on use-inspired research means our projects have direct relevance to the challenges faced by business, government and individuals around the world. The result is breakthrough technologies that provide commercial opportunities and have a positive impact on Australia's export earnings.

Our Research Themes:

-  Embedded Systems
-  Networked Systems
-  Making Sense of Data
-  Managing Complexity

Our Business Areas:

-  Biomedical and Life Sciences
-  Environmental Management
-  Intelligent Transport Systems
-  Mobile Systems and Services
-  Safety and Security
-  Software Infrastructure

For more information about NICTA Adaptation Engine

Paul Mackie
 NICTA Business Development
 Tel: +61 2 9376 2171
 Email: paul.mackie@nicta.com.au

Dr. Jenny Liu
 Senior Researcher
 Tel: +61 2 9376 2121
 Email: jenny.liu@nicta.com.au



Australian Government
 Department of Broadband, Communications and the Digital Economy
 Australian Research Council

NICTA Members



NICTA Partners