



## Introduction to Linux for Embedded Developers

**Dates:** 30 Sep–1 Oct 2009  
**Developer:** Dr Peter Chubb, NICTA  
**Presenter:** Mr Godfrey van der Linden, NICTA  
**Venue:** Australian Technology Park  
 Level 5, 13 Garden Street  
 Eveleigh NSW

### Teaching Arrangements:

The course will be conducted from 9.00am to 5.00pm. Morning tea will be available at approximately 10.00am to 10.30am, lunch from 12.30pm to 1.30pm and afternoon tea at approximately 3.00pm to 3.30pm.

**Registration Fee:**  
**AU\$1320 (including GST)**

Group and PhD student discounts available. Please enquire.

### How to Register

To register fill out the registration form (overleaf) and

- fax it to +61-8-8343-8711
- or
- scan and email it to [industryeducation@nicta.com.au](mailto:industryeducation@nicta.com.au)

### Cancellation Policy

At least 4 weeks notice is required for cancellation of a place in a short course for full reimbursement. If cancellation is later than 4 weeks then the place can either be given to another person or the registrant can be provided with a credit towards other NICTA training.

For details of further courses please see our web site: [www.nicta.com.au/short\\_courses](http://www.nicta.com.au/short_courses) or contact the NICTA Industry Education Manager.

### About this Course

Linux is becoming a leader in embedded operating systems. This **two-day** course will teach enough of the basics to get a quick start for a developer already familiar with other operating systems. Attendees will build a cross-compiled embedded system using Linux as both development platform and target, and run it under an emulator. Attendees will bring their own laptops, capable of booting from a CD. Live CDs will be provided containing all course material, exercises, useful software and a complete Linux distribution.

### Target Audience

The course will suit developers who are competent computer users and have some programming experience, but who are not necessarily familiar with Linux. The course is focused on developing skills applicable to embedded Linux, and on the tools available in and for that environment. The basic concepts however are applicable to any Linux environment (and indeed to Unix as well).

### Brief Course Outline

- The Bourne Shell
- Booting and Initialising
- Linux Editors (vi, emacs)
- Linux File system Standard
- A Tour of the Linux Kernel Sources
- Cross Compilation Basics: Building Cross Compilers, Libraries, etc., Using Snapgear
- Putting it all together: Customising, Building and Running a Complete Linux for ARM

### About the Course Developer:

**Dr Peter Chubb** spent over 13 years working in commercial operating systems training and research with Softway Pty Ltd (now [Aurema Pty Ltd](#)). He was systems architect for a number of projects including Hibernator, a checkpoint-restart tool for UNIX™; and for two years was Vice President of research while overseeing aspects of Aurema's ARMTech™ resource management product. In 2002, Dr Chubb moved to the University of New South Wales (UNSW) to work on the [Gelato](#) program, and is now employed at UNSW part time while also working for NICTA.

Since gaining his PhD at UNSW in 1989, Dr Chubb has had more than 15 years experience in Operating Systems research. Projects which included significant amounts of Dr Chubb's input and direction include the Hibernator checkpoint/ restart project for Irix 6.2 and Fujitsu's UXP/M, the Sharell resource manager for Irix 6.2 and 6.5; Solaris Resource manager; and Aurema's ARMTech for Linux and Windows.

### About the Presenter:

**Mr Godfrey van der Linden** has spent 20 years in industry working with Unix. He started working with Unix in 1991 and has been using and enjoying it since. In 1997 he joined Apple as a senior kernel architect for their, then fledgling, Mac OS X effort. While there he was a lead architect designing and implementing the kernel I/O infrastructure. In 2006 Godfrey returned to Australia and has been working towards his Ph.D. with NICTA at the UNSW, he is currently researching the power usage of hardware on battery powered computer systems, such as laptops and mobile phones.

## About NICTA and Short Course Program

National ICT Australia (NICTA) is Australia's ICT Centre of Excellence and was established to drive innovation through high quality research, research training and technology transfer. As a world-class research institute NICTA uniquely combines excellence in research, education, commercialisation and collaboration. We are working to ensure that Australia is well placed to benefit from the significant opportunities that ICT research delivers.

NICTA is funded by the Australian Government as represented by the Department of Communications, Information Technology and the Arts and the Australian Research Council through *Backing Australia's Ability* and the ICT Centre of Excellence program. NICTA members are the Australian Capital Territory Government, the New South Wales Government, the University of New South Wales and the Australian National University.

NICTA short courses offer scientists, engineers and managers technical training with a leading edge in areas such as telecommunications, transport, security, defence, logistics, e-government, mining, finance and biotechnology.

There will be ample opportunities for discussion and questions and answers. Morning and afternoon tea/coffee and a light lunch will be provided. Extensive workshop materials will be made available to participants.

### How to register

Please complete the registration form below and

- Fax it to +61-8-8343-8711 or
- Scan and email it to [industryeducation@nicta.com.au](mailto:industryeducation@nicta.com.au).

**Send the form as soon as possible to secure your place.**

For further information please contact  
Anne-Marie Eliseo  
Industry Education Manager  
Telephone: +61-8-8343-8710  
Email: [anne-marie.eliseo@nicta.com.au](mailto:anne-marie.eliseo@nicta.com.au)

## Registration Form and Tax Invoice\* ABN 62 102 206 173

\*Upon completion of this form, including the relevant payment, this form will become a Tax Invoice.

**Please register me for Introduction to Linux for Embedded Developers on 30 September-1 October 2009.**

PLEASE PRINT

Date: \_\_\_\_\_

Title: \_\_\_\_\_ First Name: \_\_\_\_\_ Surname: \_\_\_\_\_

Position: \_\_\_\_\_ Organisation/Division: \_\_\_\_\_

Postal Address: \_\_\_\_\_

Telephone No: \_\_\_\_\_ Facsimile No: \_\_\_\_\_ Email: \_\_\_\_\_

Dietary preference: \_\_\_\_\_

Course Fees:  Full fee: AU\$1320 (incl. GST)  
(Register before **Sep 16<sup>th</sup>, 2009.**)

### Method of Payment (please tick below):

Cheque (payable to National ICT Australia Ltd)  
Forward the cheque and a copy of THIS registration form to:  
Anne-Marie Eliseo, Industry Education Manager, NICTA, Innovation House, First Avenue, Mawson Lakes SA 5095, Australia.

Credit Card: Credit Card No.: \_\_\_\_\_ Expiry Date: \_\_\_\_\_

Visa  Master Card Name on card: \_\_\_\_\_

Amount: AU\$ \_\_\_\_\_ Signature: \_\_\_\_\_  Tick if receipt required

Email address of card holder: \_\_\_\_\_

Electronic Funds Transfer  
**Please advise by email to Annette Van Bramer**  
[annette.vanbramer@nicta.com.au](mailto:annette.vanbramer@nicta.com.au)  
**when payment is made**

BANK	Commonwealth Bank of Australia
ACCOUNT NAME	National ICT Australia Limited
BSB	062 900
ACCOUNT NUMBER	1032 4576
REFERENCE NUMBER	300909

**FAX the form to +61-8-8343 8711 or EMAIL it to [industryeducation@nicta.com.au](mailto:industryeducation@nicta.com.au)**

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- Send an email to [comments@nicta.com.au](mailto:comments@nicta.com.au) or
- Phone NICTA's Industry Education Manager on +61 8 8343 8710.