



## Asterisk Fast Start

**Get up to speed quickly on Asterisk technology.**

### Course Objectives

The goal of this course is to familiarize students with Asterisk and the environment in which it operates, both in terms of operating system and telephony (traditional and IP) connections — and to acquaint participants with the installation, configuration and basic operation of Asterisk. This course will take students (who do not need to have previous experience with Linux, telephony or Asterisk) from a freshly installed Linux PC through to a fully configured and working Asterisk implementation.

The emphasis is on the practical implementation, and not necessarily a detailed understanding of every element of an Asterisk deployment or the detailed workings of the underlying technologies involved — this can be obtained, if desired, subsequent to the course by further research.

At the end of the training class, participants will be able to:

- Identify the purpose and primary functionality of Asterisk as a PBX and as an application development platform
- List the functionality associated with a traditional PBX
- Explain the background to Asterisk in terms of the history of Digium and the Open Source community of which it is a part
- Define the operating system environments in which Asterisk is developed and supported
- Describe the telephony connections which Asterisk supports and identify the Digium hardware needed to effect this connectivity
- Identify the basic characteristics of analog and digital PSTN connections and how VoIP compares and contrasts with these
- Install and run Asterisk from the packages available for download from [www.asterisk.org](http://www.asterisk.org)
- Configure Asterisk to deliver basic PBX functionality including basic call routing, voicemail and directory services
- Learn the basics of Linux in order to be an effective Asterisk administrator

### Course Prerequisites

This is an entry-level course; there are no prerequisites to attend this training.

### Course Format

The Asterisk Fast Start course is a three-day course. The class will consist of a combination of lectures and lab exercises.

The labs will be presented in a workbook which the student gets to keep. The lecture notes and sample configurations will also be included. As each lab and lecture builds on the results of the previous lab and lecture, the workbook is a great way for students to work through the process at their own pace, as well as ensure that they have learned all the relevant material.

### Class Materials and Cool Stuff

Each attendee will receive the following for the course (provided by Digium and subject to change):

- Digium TDM411B Analog card (1 FXO port + 1 FXS port)
- Digium TE122P T1/E1/J1 card

- Polycom SoundPoint® IP 330 SIP Phone
- Training Courseware
- Asterisk: The Future of Telephony - O'Reilly (2nd Edition)
- Asterisk T-shirt
- Calculator
- Mouse Pad
- Uniball Digium Pen



## Asterisk Advanced

### Expand your knowledge of Asterisk.

The Asterisk Advanced course is a 4.5 day hands-on course which covers the knowledge and skills that an advanced Asterisk administrator should know to be effective at his or her job. It is a combination of both lectures and labs designed to give the students both the theory behind the concepts and the hands-on experience to be able to effectively deploy Asterisk-based solutions.

Students will learn to create advanced dial plans and create innovative telephony solutions by using the features of Asterisk. Along the way, students will also get important insight into Voice over IP, and how to design robust VoIP networks. Students will also explore connecting Asterisk to a variety of devices, including analog phones and phone lines, digital phone lines, and VoIP providers.

### Course Goal

The Asterisk Advanced course is designed to prepare Linux/Unix consultants, interconnect vendors, enterprise IT personnel, and ITSP/telco systems administrators to install, configure, manage and troubleshoot Asterisk-based VoIP systems. Items covered in the course include:

- Asterisk dialplan syntax and constructs, including auto-attendants and simple IVR system
- Effective use of Asterisk features, such as call parking, audio conferencing, find-me follow-me, and music on hold.
- Call monitoring and recording
- Theory of Analog telephony, and how to connect Asterisk to the PSTN
- Digital telephony using T1s and E1s
- VoIP fundamentals and fundamental network concepts
- SIP and IAX protocols
- Connecting Asterisk to a VoIP provider
- Configuring Asterisk to save Call Detail Records
- Call queues and ACD with Asterisk
- Call routing using DUNDi
- Using the Asterisk Manager Interface to control Asterisk from an external program
- Connecting Asterisk to a relational database such as MySQL
- Troubleshooting your Asterisk system
- Speech recognition with Asterisk and LumenVox

... and many more!

### Class Materials and Cool Stuff

Each attendee will receive the following for the course (provided by Digium and subject to change):

- Digium TDM411B Analog card (1 FXO port + 1 FXS port)
- Digium TE122P T1/E1/J1 card
- Polycom SoundPoint® IP 330 SIP Phone
- Training Courseware
- Asterisk Computer Laptop Backpack
- Asterisk T-shirt
- Calculator
- Mouse Pad
- Uniball Digium Pen

## **Prerequisites**

### Linux Knowledge:

- Have installed and worked in a Linux environment.
- Know how to manipulate files and perform basic administrative tasks from the command line.
- Know how to use a text editor to modify configuration files.

### Asterisk Experience:

- Have installed Asterisk and DAHDI from source.
- Know where Asterisk configs are located, and how to read and use sample config files.
- Know the general format/syntax of the Asterisk dialplan and the basic dialplan applications.
- Asterisk CLI: Know how to connect to remote Asterisk sessions and administer them using basic CLI commands.
- Know how to register and use VoIP devices (phones) and providers with Asterisk.

### Recommended Skills:

- Have general knowledge of VoIP protocols, especially SIP and IAX including generally how they work what ports they use.
- Programming and scripting experience: Have some familiarity with programming and scripting languages such as C, C++, Bash, Perl, etc.

## **What makes this class unique? Is it different than the Asterisk Bootcamp class?**

While teaching the ever-popular Asterisk Bootcamp classes over the past several years, we've found that our students fall into two groups — those who think the Bootcamp was too advanced, and those who think it wasn't advanced enough. To better address the needs of our students, we've created the Asterisk Advanced course for those people who already have a fundamental knowledge of Asterisk and want to take their skillset to the next level. While some of the material overlaps with the Bootcamp class, this course has been fundamentally designed to address more advanced topics than were possible in the Asterisk Bootcamp course, given the breadth of its scope.



## Digium-Certified Asterisk Professional

Whether you want to be an Asterisk Guru, administrator or developer or just learn a little more about Asterisk, Digium® offers the Asterisk training to meet your needs

Asterisk training is offered at different locations several times throughout the year.

The Digium-Certified Asterisk Professional (dCAP) certification is a verification of your knowledge of Asterisk. The certification covers a specific released, stable version of Asterisk. The program is provided at the end of the Asterisk Advanced training course.

The dCAP test consists of a 150 question written exam concerning Asterisk and Asterisk-related technology, and a hands-on practical lab exam in which you are asked to configure a PBX according to a given specification..

To pass the dCAP exam, it is recommended that you have read Asterisk: The Future of Telephony, 2nd Edition by O'Reilly, have actual working knowledge of setting up and maintaining an Asterisk server, have familiarity with the Asterisk sample configuration files, and have taken the Asterisk Advanced course. Information on open source Asterisk can be found at [Asterisk.org](http://Asterisk.org).

**Note:** Taking the Asterisk Advanced course does not guarantee that you will pass the dCAP exam.