

Lecture for Global Seismological Observation course

# Installation of Linux and SAC

Lecturer

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# Why is this lecture included in this training program? (1)

- Practices of seismic data analyses will be done using Linux workstation during this training.
- One of the most important software for this training is SAC (Seismic Analysis Code).
- When you apply your knowledge that you will obtain in this training, it is necessary to use SAC.

# Why is this lecture included in this training program? (2)

- Thus, it is necessary to learn how to construct a computational environment where you can use SAC (without heavy costs).

# Linux and SAC

- Linux is a clone OS of Unix.
- Various types of CPU are supported such as Pentium families, SPARC, PPC.
- SAC can be installed on Linux WS.

## Note

- A SAC clone that can be run on Windows platform is available on the following site: [http://www.ciri.upc.es/cela\\_pblade/CPS.htm](http://www.ciri.upc.es/cela_pblade/CPS.htm).
- A SAC source code for Cygwin is available from the IRIS site.

# Installation of Ubuntu Linux

- Ubuntu is a popular Linux distribution.
- We are going to use Linux to use WS for practices of the coming lectures.
- There are three ways to install it:
  - Only Linux
  - Linux and Windows at different HD partitions
  - Windows and Linux at the same HD partition
- It is possible to realize the third way using Wubi (Ubuntu Installer for Windows), which we are going to try in this lecture.

# Step 1

- After inserting a Ubuntu CD into your PC, please double-click the drive icon in “My Computer”.
- You will find the interface entitled “Ubuntu Menu”
- Please select “Install inside Windows”.

# Step 2

- You will have the interface entitled “Ubuntu Installer”.
- Please set each option.  
The preferable setting is explained in the lecture.
- Then, please click “Install” to start installation.

# Installation has finished.

- You will have the message  
    “Completing the Ubuntu Setup Wizard” in the interface.
- Please reboot the PC.
- When the PC is booted, you can choose the operating system that you use.
- Please enjoy two OSs.

# Network connection

- You will have an interface named “Devices – Network Tools” by following “System” -> “Administration” -> “Network Tools”.
- You can select a device from the list in “Devices” to make connection to LAN through it.
- The detailed procedure is explained in the lecture.

# Printers

- You will have an interface named “Printer configuration” by following “System” -> “Administration” -> “Printing”.
- You can find network printers that you can use during the training course from this interface.
- Then, follow the procedure given in the interface to set up a printer.

# Software management

- You will have an interface of Synaptic Package Manager by following “System” -> “Administration” -> “Synaptic Package Manager”.
- You can manage software packages installed on your PC using this interface.

# SAC

- SAC (Seismic Analysis Code) is one of the most intensively used software in the field of seismology.
- You can learn how to get SAC at  
<http://www.iris.washington.edu/manuals/sac/index.htm>  
<http://www.iris.washington.edu/manuals/sac/sac.request.htm>

# Environment setting for SAC

- Path

Include the directory where “sac” (binary for SAC) is to the path.

- Environmental variables

- For csh or tcsh

- setenv SACDIR (directory of “sac”)

- setenv SACAUX \${SACDIR}/aux

- For bash

- export SACDIR=(directory of “sac”)

- export SACAUX=\${SACDIR}/aux