



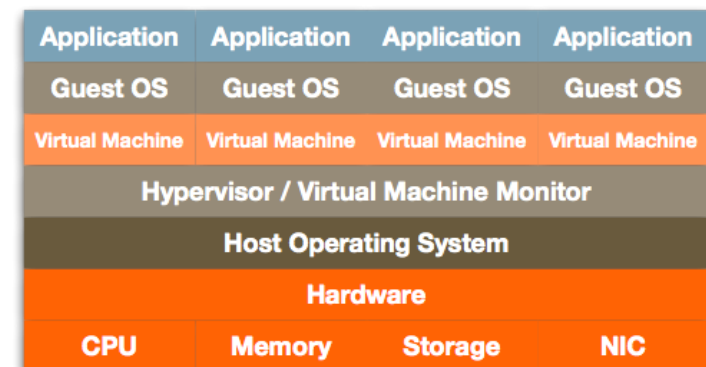
Virtual Machines

Giulio Salierno, Nicola Biccocchi

giulio.salierno@unimore.it, nicola.biccocchi@unimore.it

Virtual Machines

- Permettono l'esecuzione parallela di più Sistemi Operativi (guestOS) su una singola macchina fisica (hostOS)
- La VM astrae le risorse hardware fisiche (CPU, memoria, dispositivi I/O) permettendone la condivisione tra guestOS
- Vantaggi: Portabilità, Indipendenza dall'hardware, Isolamento

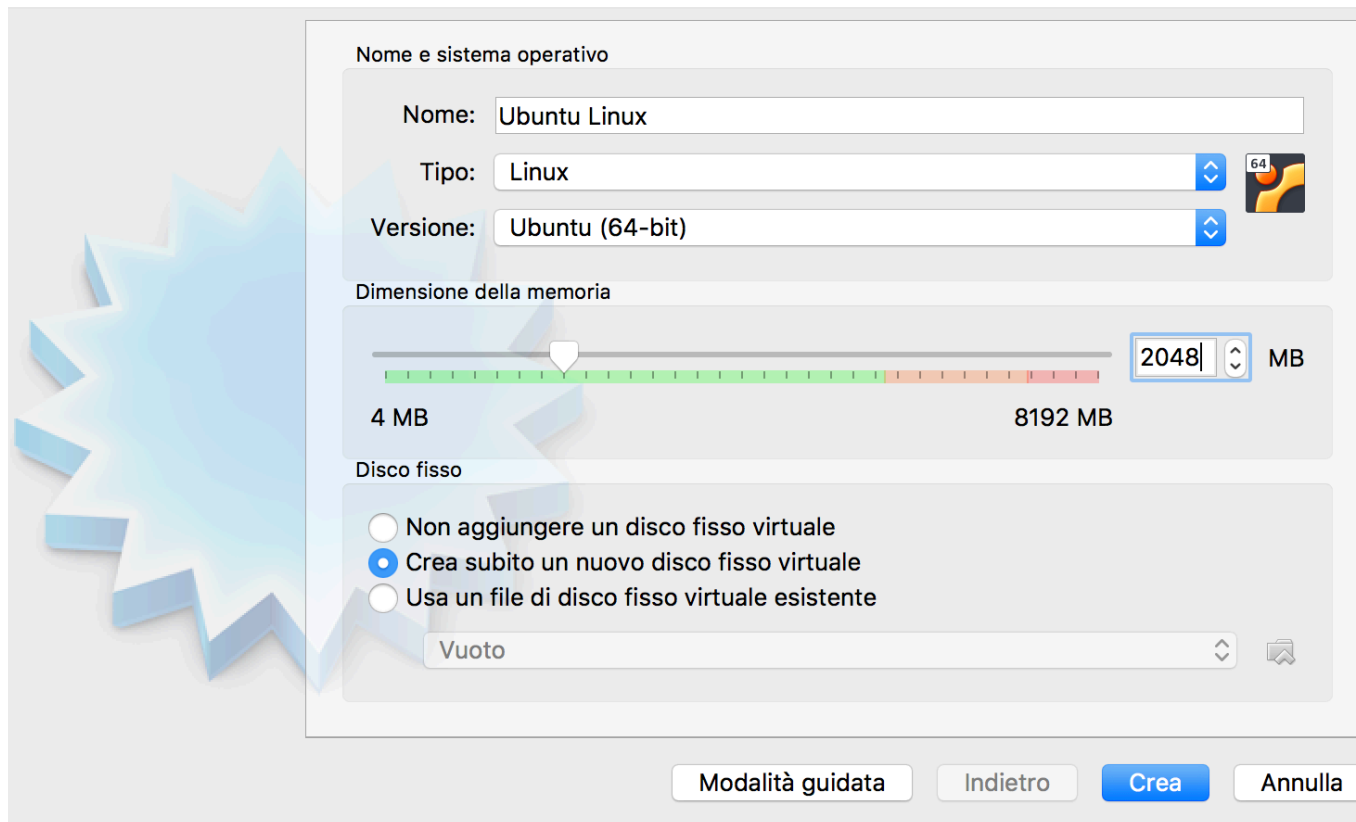


Virtualbox: type-2 hypervisor




- Scaricabile al link: <https://www.virtualbox.org/>
- Documentazione: <https://www.virtualbox.org/manual/UserManual.html>
- guestOS supportati (Windows, Linux, FreeBSD, OpenBSD, Mac OS X)
- La distribuzione Linux che installeremo è disponibile al link: <https://www.ubuntu.com/download/desktop>

Creating VMs (I)



Nome e sistema operativo

Nome:

Tipo: 

Versione:

Dimensione della memoria

2048 MB

4 MB 8192 MB

Disco fisso

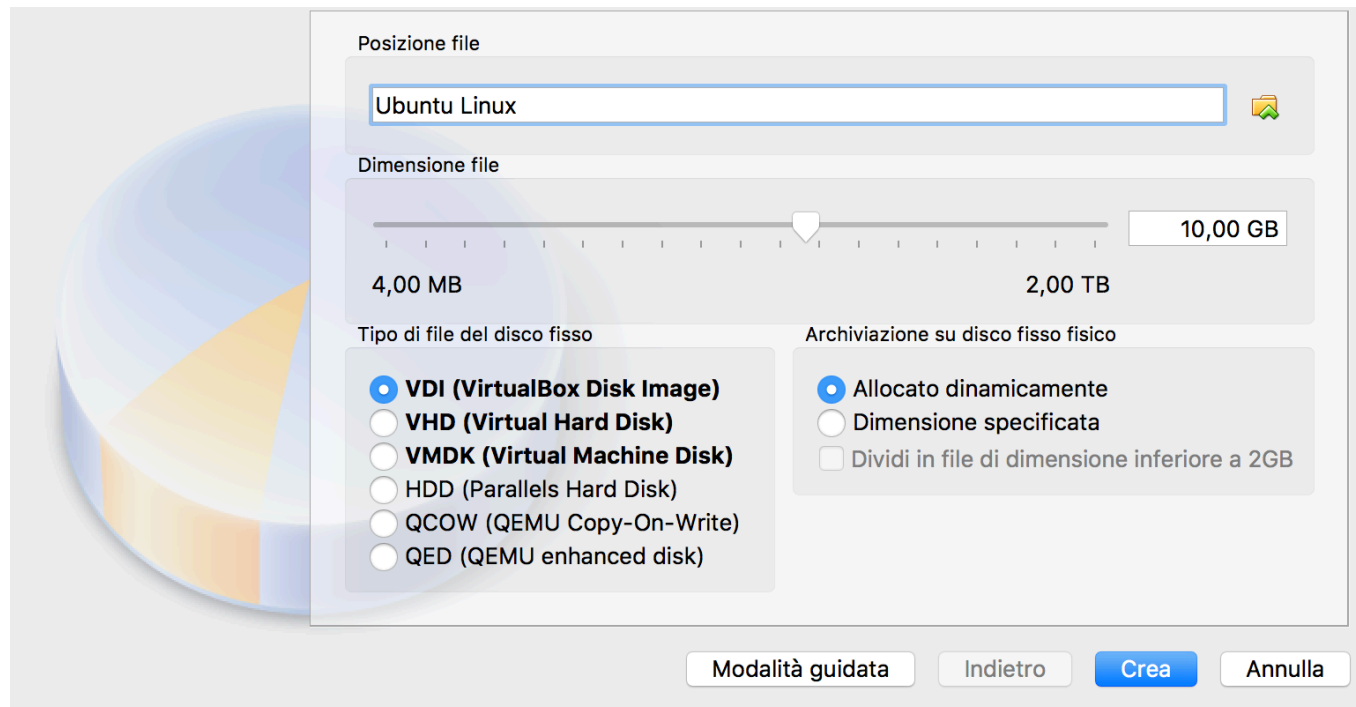
☐ Non aggiungere un disco fisso virtuale

☒ Crea subito un nuovo disco fisso virtuale

☐ Usa un file di disco fisso virtuale esistente

Modalità guidata Indietro Crea Annulla

Creating VMs (II)

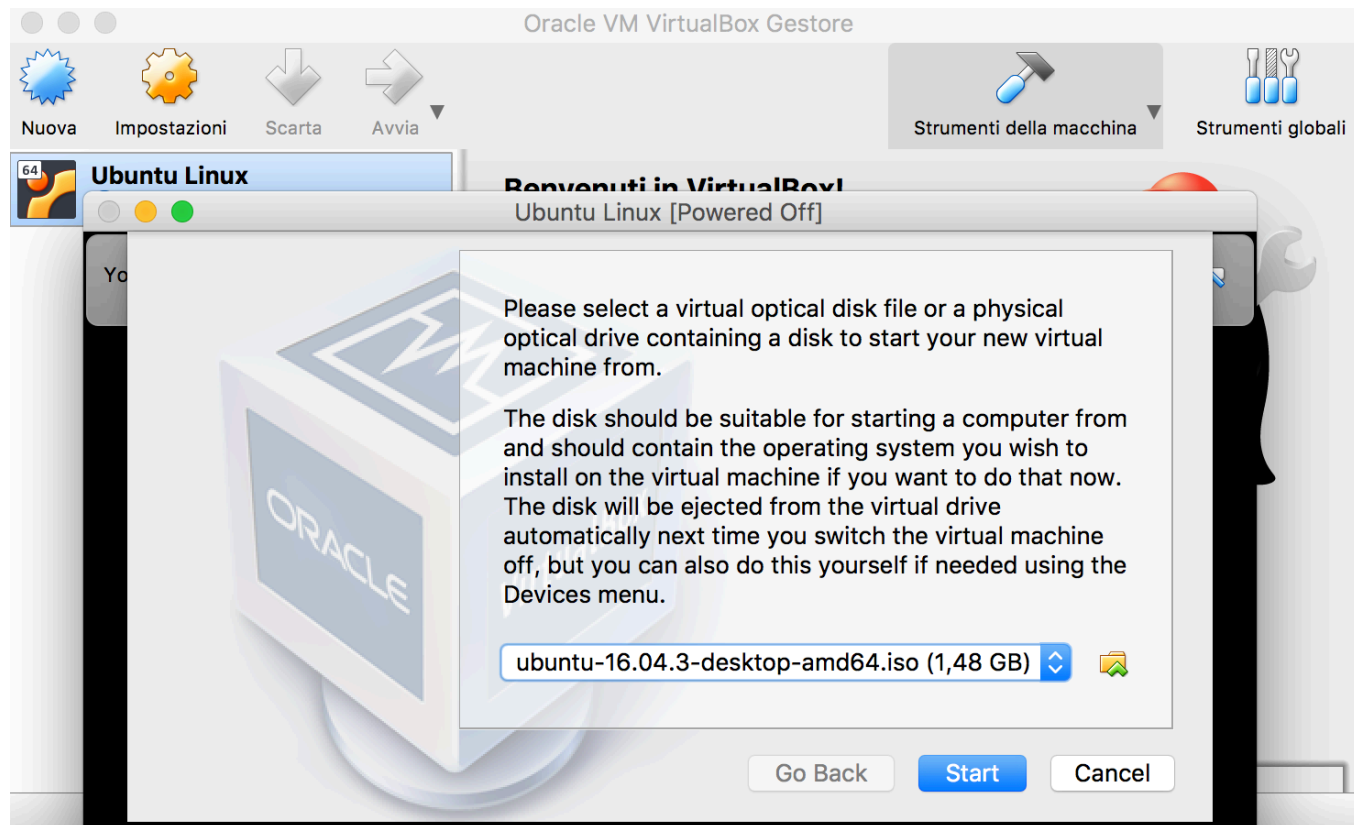


The screenshot shows a window for creating a virtual machine disk. On the left is a 3D pie chart with blue, yellow, and orange segments. The main window has the following sections:


- Posizione file**: A text box containing "Ubuntu Linux" and a folder icon.
- Dimensione file**: A slider ranging from 4,00 MB to 2,00 TB, with a value of 10,00 GB displayed in a box on the right.
- Tipo di file del disco fisso**: A list of radio buttons:
 - ☒ **VDI (VirtualBox Disk Image)**
 - ☐ **VHD (Virtual Hard Disk)**
 - ☐ **VMDK (Virtual Machine Disk)**
 - ☐ HDD (Parallels Hard Disk)
 - ☐ QCOW (QEMU Copy-On-Write)
 - ☐ QED (QEMU enhanced disk)
- Archiviazione su disco fisso fisico**: A list of radio buttons and a checkbox:
 - ☒ **Allocato dinamicamente**
 - ☐ Dimensione specificata
 - ☐ Dividi in file di dimensione inferiore a 2GB

At the bottom are four buttons: "Modalità guidata", "Indietro", "Crea", and "Annulla".

Installing guestOS (I)



Installing guestOS (II)



Install (as superuser)

Installation type

This computer currently has no detected operating systems. What would you like to do?

- ☒ **Erase disk and install Ubuntu**
Warning: This will delete all your programs, documents, photos, music, and any other files in all operating systems.
- ☐ **Encrypt the new Ubuntu installation for security**
You will choose a security key in the next step.
- ☐ **Use LVM with the new Ubuntu installation**
This will set up Logical Volume Management. It allows taking snapshots and easier partition resizing.
- ☐ **Something else**
You can create or resize partitions yourself, or choose multiple partitions for Ubuntu.

[Back](#) [Install Now](#)

Changing VM's parameters

