

Install Annif: usage in VirtualBox

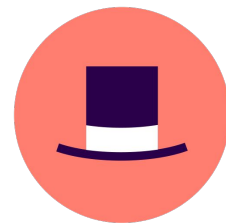


VirtualBox

- Software for running virtual machines on a host computer
 - E.g. Linux on Windows or MacOS host
- Virtual machine can be saved as an image (a group of files)
- For running the machine image with Annif the VirtualBox software needs to be installed on your computer, see e.g. www.virtualbox.org
 - Basic install is enough



By Oracle Corporation - This image may be found in VirtualBox 4.2 for Windows hosts, GPLv2, <https://commons.wikimedia.org/w/index.php?curid=24112652>



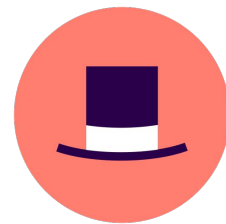
Annif with VirtualBox image

- Image based on Xubuntu 20.04 (one Linux distribution) with ready-to-use Annif and the files needed for this tutorial:
annif.org/download/annif-tutorial-vbox.zip (~2 GB)
- Easy way to test Annif and complete the tutorial

The screenshot shows a web browser window with the address bar displaying <https://annif.org/download/>. The page content indicates that the directory contains downloadable files related to Annif. Below this, there is a table with columns for Name, Last modified, Size, and Description.

	Name	Last modified	Size	Description
	Parent Directory		-	
	annif-tutorial-vbox-2021-11.zip	2021-11-11 15:13	2.1G	
	annif-tutorial-vbox-2021.zip	2021-11-11 15:13	2.1G	
	annif-tutorial-vbox-2022-05.zip	2022-05-17 12:52	2.2G	
	annif-tutorial-vbox-2022-09.zip	2022-09-23 15:55	2.5G	

Troubleshooting

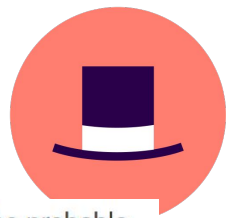


In case of the following error after any Annif command

Illegal instruction (core dumped)

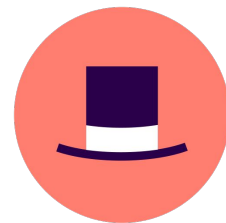
see the exercise page for how this can be solved.

Troubleshooting



Troubleshooting: If Annif fails to start and the error message shows `Illegal instruction (core dumped)` on a Windows host, the probable cause is that [AVX support](#) is not available inside the virtual machine. Here are two ways that can be tried solve the problem:

1. Make the AVX support available by tweaking Windows settings ([from VirtualBox forum](#), also other messages in the thread can be worth reading):
 - Hyper-v competes for resources and needs to be disabled. To check the status of Hyper-v in Windows 10, *right click start | Run | `OptionalFeatures.exe`* , and look for the "Hyper-V" option. The box should be empty, not checked or shaded. If you want to be absolutely sure that Hyper-v is gone then open an administrator command console and type `bcdedit /set hypervisorlaunchtype off` . Make sure to fully power down and reboot the host after changing the Hyper-v setting.
 - On some Windows hosts with an EFI BIOS, DeviceGuard or CredentialGuard may be active by default, and interferes with OS level virtualization apps in the same way that Hyper-v does. These features also need to be disabled. On Pro versions of Windows you can do this using `gpedit.msc` (set *Local Computer Policy > Computer Configuration > Administrative Templates > System > Device Guard > Turn on Virtualization Based Security* to *Disabled*. CredentialGuard is a subset of DeviceGuard, so disabling the former should be enough. If you cannot use gpedit for some reason then the equivalent registry hack is to find the key `HKLM\SYSTEM\CurrentControlSet\Control\DeviceGuard\EnableVirtualizationBasedSecurity\Enabled` and set it to `0`.
2. Remove the need for AVX by uninstalling TensorFlow package. This is simple, however it means that neural network ensemble models can not be used and (optional) exercises [10](#) and [11](#) completed. In a terminal window run the command `pip uninstall tensorflow-cpu` and confirm uninstallation by pressing `y` .



Steps

- Download the image (~2GB zip archive) from <https://annif.org/download/annif-tutorial-vbox-2020.zip>
- Extract the folder *annif-tutorial* from the zip archive to *VirtualBox VMs* folder in your home directory
- Start up the VirtualBox software, add the image (*annif-tutorial.vbox*), and start the virtual machine
- Open terminal window

Annif is now ready to be used!